TEXTILE TECHNOLOGY DIGEST

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ABSTRACTS

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FIBERS A

TEXTILE FIBER AND USE SURVEY, 1949-1957. Textile Organon 30: 1-20 (Jan. 1959). (362)

Data are given on 102 end uses of cotton, wool, and manmade fibers by years from 1949 through 1957. The same end uses for the census year 1954 are given for silk, linen, jute, and sisal. The study measures the results of interfiber competition for these end uses in the United States, but does not measure the additional competition arising from such nontextile products as plastics and paper. Copies of the study are available from the Textile Economics Bureau, Inc., 10 E. 40 St., New York 16, N.Y., at $1.50 each.

Natural fibers A1

HANDLING BALES OF COTTON IN PUBLIC WAREHOUSES: METHODS AND EQUIPMENT. J. B. Wilmeth and C. D. Bolt. U.S. Agri. Mktg. Serv., Washington 25, D.C. Oct. 1958. 74 p. Mktg. research report no. 250. Order from Superintendent of Documents, Washington 25, D.C. 45¢. (363)

The purpose of the cotton-handling research described in this report was to determine what handling methods and equipment cotton warehousemen can use to increase efficiency and reduce costs. Unloading, weighing, stacking, and other tasks in the warehousing of cotton were studied to determine the relative efficiency and economy of different methods. Tables, graphs, photos, 6 refs.

UPGRADING INDIAN COTTONS. A. N. Gulati. Indian Textile J. 68: 712-715, 738 (Sept. 1958). (364)

Combing, blending of cottons, chemical aids to processing, and new spinning techniques are considered briefly as possible ways of spinning Indian cottons into yarns finer than 30s count. 8 refs.

TENSILE STRENGTH OF ASBESTOS. R. Zukowski and R. Gaze (Cape Asbestos Co. Ltd). (Letter to the editor). Nature 183: 35-37 (Jan. 3, 1959). (365)

Tensile measurements (including modulus determinations) were carried out on asbestos of different types. Results were obtained higher than any previously reported. The type of failure occurring when asbestos fibers break was studied using high-speed photographs. Photo, graph, tables, 7 refs.

TECHNOLOGICAL REPORTS ON STANDARD INDIAN COTTONS, 1957. R. L. N. Iyengar. Indian Central Cotton Comm. Technol. Bull. Ser. A No. 95: 1-112 (Jan. 1958). (366)

INTERACTION OF WOOL AND WATER. PART 4. RATES OF SWELLING OF VARIOUS KERATIN FIBERS FOLLOWING ABSORPTION OF WATER FROM THE LIQUID PHASE. A. R. Haly (Wool Textile Research Labs., CSIRO). Australian J. Appl. Sci. 9: 410-418 (Dec. 1958). (367)

Keratin fibers from various sources were dried, immersed in water at 25° C, and the consequent diametral swelling measured by a microscope method. When volume swelling was plotted against time/(fiber radius) the results suggested a general trend. With a few exceptions Lincoln and Corriedale fibers of various diameters yielded one curve. A similar trend was found for Merino wool, but the curves indicated that if typical Lincoln and Merino fibers of the same diameter could be obtained the rate of uptake of water by the Lincoln fiber would be approximately twice that taken up by the Merino fiber. Kid mohair behaved like Lincoln wool, but results for human hair covered a large range. Graphs, 6 refs.

TEXTILE ASBESTOS. E. Frieser. Z. ges. Textil-Ind. 60, No. 16: 704-707; No. 17: 751-755 (1958). In German. Through BCIRA 38: 665 (1958). (368)

In this review, the author discusses the chemical composition, classification of the technically important asbestos types, their chemical examination, loss on ignition, acid and alkali resistance, specific gravity, and methods for quantitative determination of asbestos-containing yarns. 20 refs.

PHYSICOCHEMICAL STUDIES OF JUTE FIBER CELLULOSE AT DIFFERENT STAGES OF PLANT GROWTH. H. Chatterjee and A. K. Mazumdar (Indian Central Jute Comm.). (Letter to the editor). J. Sci. Ind. Research (India) 17: 506-507 (Dec. 1958). (369)

Tables, 4 refs.

YARN PRODUCTION B

WILSON KNOWLES TWO-SWIFT RAG TEARING MACHINE OFFERS DOUBLE OUTPUT. N. C. Gee. Textile Mfr. 84: 616-618 (Dec. 1958). (370)

Features of the machine are described in detail. Diagr, photos.

PREPARATION OF COTTON RAGS FOR GRINDING. M. Boncelj. Tekstil 7, No. 8: 637-651 (1958). In Serbocroat. Through BCIRA 38: 666 (1958). (371)

This is a review of 50 literature references relating to beating, washing and disinfecting, drying, and sorting of rags and the respective machinery.

COTTON PROCESSING WASTE: A MILL SURVEY. R. V. Miraldi. National Cotton Council of America, Utilization Research Div., Memphis, Tenn. 1958. 60 p. Free. (372)

This survey contains information supplied by more than 200 mills during 1956 and 1957, covering 27 fabric and 13 yarn classifications manufactured from 1956 crop cotton. Its purpose is to determine as accurately as possible (1) average total waste, (2) waste removed at each process, (3) average raw stock characteristics, and (4) machinery and production data where it most affects cotton waste in the manufacture of a range of yarns and fabrics. Graphs, tables, 8 refs.

SECRETS OF TERYLENE/COTTON BLENDING. Skinner's Silk & Rayon Record 33: 46-48 (Jan. 1959). (373)

The advantages which the addition of Terylene to cotton can offer are discussed. Procedures suggested in this article are intended as a guide to processing Terylene/cotton blends.

SUITABLE LUBRICANT FOR THE COTTON TWO-ROLLER SPINNING MILL. W. Günter. Z. ges. Textil-Ind. 60, No. 14: 647-648 (1958). In German. Through BCIRA 38: 666 (1958). (374)

Reference is made to the "non-greasing" lubricant Praeparol AS (Chemische Fabrik Stockhausen & Cie, Krefeld), which is available as a soft, yellowish-white paste and imparts to the treated fibers a very high surface smoothness, ensuring also setting of short fibers during yarn preparation. The presence of the lubricant causes no change in shade on subsequent dyeing. Resinification and autoxidation on the fiber were not observed.

Opening, picking, fiber preparation B1

COMBINED DECORTICATING, FIBER EXTRACTING, AND WASHING MACHINE FOR MECHANICAL PROCESSING OF JUTE AND RELATED BAST FIBER PLANTS. W. Klob. Melliand Textilber. (English ed.) 39, No. 4: 220 (1958). (375)

Converts plant stalks into fiber in a single operation with a production capacity of 1 to 3 tons of dry raw fiber in 8 to 10 hr. Diagr.

Carding and combing B2

MODERN INDIVIDUAL DRIVES ON REVOLVING FLAT CARDS. H. Ebert. Z. ges. Textil-Ind. 60, No. 20: 903-905 (1958). In German. Through BCIRA 38: 724 (1958). (376)

The characteristic features of various card drive systems are described and illustrations are given.

MODERN FLAX SPINNING PRACTICE: CARDING OF FLAX TOWS. Textile Recorder 76: 50-51 (Jan. 1959). (377)

The arrangement and working of a typical finisher card are described. Diagr, photo.

SOME EXPERIMENTS WITH RADIOACTIVE TRACER FIBERS IN A FLAT CARD. A. E. De Barr and K. J. Watson (Shirley Inst.). J. Textile Inst. 49: T588-T607 (Nov. 1958). (378)

This paper describes the procedure adopted and some of the results obtained in experiments designed to investigate the possibility of using radioactive tracer fibers to study the mechanism of carding. A small-scale card, with stationary flats, was used and, in the experiments described, either one or two flats were employed. Summarized results of observations of the passage through this card of more than 600 fibers are given, and their interpretation is discussed. An assessment is made of the value of the radioactive tracer technique for the investigation of carding behavior. Diagrs, photo, tables, 4 refs.

NEW TECHNIQUE IN MATING SWIFT, WORKERS, AND DOFFER OF A WOOLEN CARD. T. W. G. Ashdown and P. P. Townend (Leeds Univ.). Textile Mfr. 84: 619-621 (Dec. 1958). (379)

A series of tests was carried out to determine the relative importance of the density of pins in the clothing used to cover the swift, workers, and doffer. The number of different combinations of card clothing was kept to a minimum. Eight different sets were tested using different combinations of 80/8/29 and 140/14/35 card clothing on swift, workers, and doffer. The use of coarse clothing on the swift together with fine workers and coarse doffer produced webs that were comparable with those from a fine swift used in conjunction with any combination of clothing. With all combinations of swift and worker clothing a coarse doffer produced better carded webs than did a fine one. Tables.

METHOD FOR THE CONTROL OF NOBLE COMBING. D. S. Taylor (Wool Textile Research Labs.). J. Textile Inst. 49: T532-T539 (Nov. 1958). (380)

Investigations on industrial Noble combing practice reveal excessive variations in both tear and rate of production and emphasize the need for a satisfactory means of controlling the comb. A suitable autoleveler device is described and shown to reduce the range of the variations in production within comb loads from more than 25% to less than 5%. The device also permits rapid estimation of the rate of production/tear curve, and hence the optimum rate of combing, for a particular batch of wool and, when set, will maintain the comb at that rate. Tables, diagrs, photo, graphs, 5 refs.

Drawing and roving B3

SOME CAUSES AND EFFECTS OF ROLL RUNOUT. H. Granberry (West Point Mfg. Co.). Textile Inds. 123: 59-63 (Jan. 1959). (381)

The causes of roll runout, what it does to yarn quality, how it is measured, and how it may be corrected are covered in this article. Photos, diagrs, graphs.

Spinning, winding, twisting B4

APPLICATION OF AMBLER SUPERDRAFTING. D. M. Hannah. Textile Recorder 76: 64-65 (Jan. 1959). (382)

Application to wool ring spinning frames is explained. Photos.

HOW TO CALCULATE TRAVELER WEIGHTS. J. Duerst (Coats & Clark Inc.). Textile World 109: 64, 126-128 (Jan. 1959). (383)

The main factors to be considered are spindle speed, ring size, weight of travelers, and yarn strength. Traveler friction and traveler air resistance must also be considered. Tables and mathematical formulas based on these factors are given.

SPINNING BALLOON. PART 1. EXPERIMENTAL DETERMINATION OF THE FORCES ACTING IN THE SPINNING BALLOON. A. Capello (Istituto di Meccanica delle Macchine). J. Textile Inst. 49: T566-T578 (Nov. 1958). (384)

An experimental method is described for the determination of the forces acting on the yarn in the spinning balloon. The results of a series of tests performed with this method are described and discussed. Diagrs, photos, tables, graphs, 4 refs.

SPINNING BALLOON. PART 2. AN APPROXIMATE SOLUTION OF THE EQUATIONS OF THE SPINNING BALLOON THROUGH SIMPLIFICATIONS SUGGESTED BY EXPERIMENTAL RESULTS. A. Capello (Istituto di Meccanica delle Macchine). J. Textile Inst. 49: T579-T587 (Nov. 1958). (385)

From the photographic observations described in Part 1, formulas are deduced for the determination of the balloon shape when the tension T_x is given and for the determination of T_x when the maximum radius of the balloon is given. Graphs, tables, 2 refs.

SIMPLEX RING SEPARATOR. H. B. Wolf. Spinner u. Weber 76, No. 15: 904-907 (1958). In German. Through BCIRA 38: 666 (1958). (386)

Experiences with the Simplex balloon rings are described and advantages resulting from their use are enumerated.

COTTON WASTE SPINNING. G. Schlese. Spinner u. Weber 76, No. 11: 647-659 (1958). In German. Through BCIRA 38: 666 (1958). (387)

The machinery described makes it possible to produce from cotton spinning and weaving waste, short-stapled cottons, etc., a voluminous cotton yarn with high regularity for weaving cheap fabrics.

WORK CONDITIONS IN THE SPINNING MILL AS A RESULT OF SYSTEMATIC CLEANING. R. Lücker. Z. ges. Textil-Ind. 60, No. 12: 521-524 (1958). In German. Through BCIRA 38: 667 (1958). (388)

The machine parts to be cleaned, method and means for cleaning, and cleaning frequency are discussed, ring-spinning machines being given as an example.

DOUBLE-BAND SPINDLES ON MODERNIZED TWISTING MACHINES. J. Brocker. Z. ges. Textil-Ind. 60, No. 14: 646-647 (1958). In German. Through BCIRA 38: 667 (1958). (389)

The newly developed double-wharve spindle described can be used on old twisting machines to adapt their productivity to that of modern twisting machines. Advantages of the spindle are enumerated.

SPECIAL ARU-TYPE TWISTING MACHINE. M. Brüggemann. Textil-Praxis 13, No. 9: 913-914 (1958). In German. Through BCIRA 38: 698 (1958). (390)

The ARU doubler-twister (Assembleuse Retordeuse Universelle) is described. The machine (constructed by the Ateliers Roannais de Constructions Textiles) was originally developed for the glass-fiber industry, but is adapted now for the production of sewing threads and knitting yarns.

STOP MOTIONS ON RING TWISTING MACHINES. R. Struve. Z. ges. Textil-Ind. 60, No. 17: 759-761; No. 18: 802-804 (1958). In German. Through BCIRA 38: 725 (1958). (391)

Various types of stop motions used at present on ring twisting machines are reviewed; several systems and their characteristic features are described, and their advantages and disadvantages are pointed out.

RING SPINNING MACHINE FOR COTTON, G-4 TYPE. W. T. Swatek. Industrie Textile: 505-514 (July 1958). In French. Through BCIRA 38: 698 (1958). (392)

Constructional details of the Rieter ring spinning machine, G-4 model, are described. In addition to giving a higher yield, the machine is specially designed for producing high quality yarns. Several versions are available of the drive, the drawing gear, and the creel.

Yarns B5

TWIST AND STRENGTH OF FINE COTTON YARNS. P. Luc. Rev. Textile 57, No. 2: 55-59; No. 3: 103-106; No. 4: 159-163; No. 5: 209-215; No. 6: 263-271 (1958). In French. Through BCIRA 38: 681 (1958). (393)

The American and French spinning methods and machinery are compared to show why the American yarns are stronger (even at the same twist) and cheaper than those produced in France. Laboratory control methods for raw cotton and yarns are reviewed and the purpose of twisting and dependence of the twist to be imparted to a yarn upon the type of cotton, fiber length, manner in which the cotton was treated before spinning, yarn count, and end-use of the yarn are discussed.

NEW METALLIC YARNS. E. Frieser. Z. ges. Textil-Ind. 60, No. 17: 757-759 (1958). In German. Through BCIRA 38: 667 (1958). (394)

Producers are mentioned and the production of Lurex, Metlon, Cellometall, Conomet, Fairtex, Lame, and Malora metallic yarns is described, the processing and finishing of Lurex yarn being described in greater detail and supplemented with a table listing its physical properties. 15 refs.

EFFECT OF COARSE FIBERS ON YARN QUALITY AND ON THE PROCESSING VALUE DURING SPINNING OF B-TYPE RAYON STAPLE. L. Rudolph. Tekstil 7, No. 9: 725-736 (1958). In Serbocroat. Through BCIRA 38: 726 (1958). (395)

The study was carried out on yarn Nm 85 produced from B-type rayon staple Nm 6400/40 to which coarse fibers of Nm 450, 300, and 200 were added. It was found that, for satisfactory spinning, the proportion of coarse fibers should not exceed 0.3%. The technological properties of the yarn are not affected by different fineness and the percentage of coarse fibers.

SHRINK FOR FANCY YARNS. P. Abbenheim. Textile Inds. 123: 66-69 (Jan. 1959). (396)

The Young-Seidler system for making certain novelty yarns on conventional twisting equipment is based on the unequal shrinkage of two yarns twisted together. Any yarn can be used for the core provided it will shrink by more than 30% after heat or chemical treatment. Photos.

MODIFIED CONTINUOUS-FILAMENT YARNS. D. F. Arthur (Brit. Nylon Spinners Ltd). J. Textile Inst. 49: P638-P647 (Nov. 1958). (397)

The five basic types of bulk and stretch yarns (twist-set-untwist crimped, edge-crimped, stuffer-box-crimped, air-blast-bulked, and stretch monofilament) are characterized, and their physical properties are discussed. Diagrs, photos, tables, graphs.

EFFECTS OF STAPLE AND DENIER OF CHEMICAL FIBERS ON THE IRREGULARITY OF DRAW FRAME SLIVERS AND YARNS. W. Wegener and H. Meister. Reyon Zellwolle Chemiefasern No. 6: 432-435; No. 7: 502-504; No. 8: 587-596; No. 9: 662-666 (1958). In German. Through BCIRA 38: 681 (1958). (398)

The investigation was carried out to ascertain whether the regularity is better and the dynamometric properties more favorable in chemical fiber systems with various staple lengths and different deniers. The results of the previous investigation (see abstr. 2871/58) were confirmed: best results were obtained from fiber blends with 80-100-120 mm staple lengths and uniform denier. Production of yarns from fiber systems with staggered staple length and denier is not recommended because of greater irregularity as well as higher costs. 12 refs.

SEGREGATION OF COMPONENT FIBERS IN BLENDED YARNS. J. E. Ford (Shirley Inst.). J. Textile Inst. 49: T608-T620 (Nov. 1958). (399)

The segregation of fibers in blended yarns, resulting in uneven transverse distribution of components, is discussed and considered desirable or undesirable according to the motive in producing the blended yarn. Experiments are described on a wide range of blends of manmade fibers, in which segregation has been found to depend upon the denier, staple length, chemical identity, and certain physical properties of the components. Indications are given of the direction in which these factors operate in securing uneven transverse distribution, and the information is potentially useful in the design and adequate prediction of properties of blended yarns. Photomicrographs, tables, graphs, 5 refs.

RADIAL DISTRIBUTION OF FIBERS IN BLENDED YARNS. PART 2. FACTORS AFFECTING THE PREFERENTIAL MIGRATION OF COMPONENTS IN BLENDS. J. B. Hamilton and D. N. E. Cooper (Courtaulds Ltd). J. Textile Inst. 49: T687-T705 (Dec. 1958). (400)

Fifteen selected binary blends, nominally 50/50 by weight, were specially spun on the cotton system and the radial distribution of blend components characterized by a previously described "Migration Index." It was established that significant migration of components can occur in these blends, and that the direction and extent of migration is determined mainly by the relative staple lengths and deniers of the components. Relative shortness and coarseness of fiber are cumulative factors tending to induce outward migration towards the surface of the yarn. Although individual yarn cross-sections exhibit considerable variations in the radial distribution of components, the mean distribution for each yarn as a whole has been shown to depend on a general form common to all 15 yarns and, for each individual yarn, on a quantitative factor shown to be proportional to its migration index. Mean migration indexes determined range from zero, corresponding to uniform distribution, to 33%. The standard error of the mean percentage migration index based on a sample of 50 cross-sections is approximately 2. Diagrs, graphs, tables, 11 refs.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

TAMARIND KERNEL POWDER SIZING IN SACKING MANUFACTURE. K. K. Chatterjee, M. C. Majumdar, A. K. Guha, and P. K. Saha (Indian Central Jute Comm.). Textile Mfr. 84: 604-606 (Dec. 1958). (401)

Laboratory trials on sizing of sacking warp yarns made from commercially used blends of jute, mesta, and root-cuttings show that the warp breaking strength increases on application of size in the concentration range from 0.5 to 3%. Tables, 7 refs.

EFFECT OF STRETCHING THE WARP YARN DURING SIZING ON THE SHRINKAGE OF SPUN RAYON FABRIC. E. A. Onikov. Tekstil. Prom. 18, No. 4: 26-28 (1958). In Russian. Through BCIRA 38: 728 (1958). (402)

The reduction in yarn thickness as a result of stretching it during sizing (2-6%) disappears on relaxation of the yarn, associated with an irreversible increase in the yarn diameter. Additional deformation of the yarn, depending upon and proportional to the degree of stretching during sizing, takes place on the loom as a result of repeated stresses. It is, therefore, necessary to standardize the parameters affecting the loom performance, as well as to choose the correct tension on the sizing machine, in order to reduce fabric shrinkage.

WARP STABILIZATION ON THE SLASHER OF FILAMENT YARN WARPS OF DACRON POLYESTER FIBER. E.I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Dec. 1958. 3 p. Bull. D-104. Free. (403)

HIGH EFFICIENCY SIZING MACHINE WITH COMBINED SINGLE- AND MULTI-WEB DRYER. G. Stelzer. Spinner u. Weber 76, No. 15: 910-912; No. 18: 1103-1104 (1958). In German. Through BCIRA 38: 668 (1958). (404)

Detailed descriptions are given of the high-efficiency sizing machine, EMTE model, with combined single- and multi-web dryer and automatic squeezing-roller weighting and releasing mechanism, and of the beaming machine, DE model, with direct beam drive (both recent constructions of Gebrüder Sucker, GmbH, München-Gladbach).

SLASHING PRODUCER TWIST NYLON BY THE CHEMSIZE METHOD. Chemstrand Corp., Pensacola, Fla. 1959. 14 p. Bull. no. 3.12. Free. (405)

Size-impregnated yarns are wet-split and partially dried in a separated state before being reassembled and completely dried. Partial drying surrounds the undried size coating on each yarn with a nontacky layer of substantially dry size which prevents sticking and minimizes breakage. The Chemsize method is described and illustrated in detail. Diagrs, graphs, photos.

USE OF BLOWER NOZZLE FOR DRYING YARN DURING SIZING. P. M. Shchukin. Tekstil. Prom. 18, No. 4: 23-26 (1958). In Russian. Through BCIRA 38: 728 (1958). (406)

Weaving C2

NEW AUTOMATIC WEAVING MACHINE. B. Hesse. Spinner u. Weber 76, No. 12: 735 (1958). In German. Through BCIRA 38: 668 (1958). (407)

The BES model of the high-efficiency automatic loom (Roscher, Bamberg) is characterized by improved driving means, the built-in motion for working backwards, and the newly developed stopping device controlled by the tappet shaft. The machine was shown for the first time at the Hanover Fair.

HYDRAULIC PICKING OF THE JET LOOM. V. Svaty. Veda a Vyzkum v Prumyslu Textilnim 3: 25-48 (1958). In Czech (English summary). Through BCIRA 38: 669 (1958). (408)

The picking mechanism of the Svaty loom, in which the weft from a large cross-wound cone is directed by a water jet through the warp shed, is described and illustrated. A good quality warp (e.g. rayon) is necessary, and, at present, the system can only be used for cloths of medium width. Literature and patent references are listed.

DRIVING MEANS FOR INSERTING THE WEFT THREAD. J. Schneider. Z. ges. Textil-Ind. 60, No. 12: 525-529; No. 14: 649-655; No. 15: 680-681 (1958). In German. Through BCIRA 38: 669 (1958). (409)

Mechanisms for weft insertion are reviewed, especially picking arrangements (overpick, underpick, and spring picking motions, picking motions on crank buckskin looms, and on silk looms, parallel picking motions with swing foot, picking motion control means, and safety coupling for picking motion).

STOPPAGE MECHANISM OF THE LOOM LAY. J. Charvat. Veda a Vyzkum v Prumyslu Textilnim 3: 51-70 (1958). In Czech (English summary). Through BCIRA 38: 669 (1958). (410)

The paper is concerned with an analysis of the 4-bar linkage mechanism and the possibility of converting it into a 6-bar linkage mechanism to give a rest position of the lay in the position of the pick of the shuttle through the warp.

MECHANICAL LOOMS AND WEAVING MACHINES. J. Schneider. Z. ges. Textil-Ind. 60, No. 17: 761-765; No. 18: 806-809; No. 19: 854-859 (1958). In German. Through BCIRA 38: 729 (1958). (411)

In this review, the author discusses the mechanisms of cotton, rayon, and wool looms, looms with jacquard machines, the felt-cloth loom, the terry loom, looms for pile weaving, the 2-ply carpet loom, and weaving machines in which the weft insertion differs from the conventional principle (Sulzer, Neumann, Gabler, Ancet-Fayolle, Dewatex, Ripamonti, Thoumire, Tumack, Maxbo, and Kovo systems).

NEW STARTER FOR LOOMS. V. P. Samoilov. Tekstil. Prom. 18, No. 4: 54 (1958). In Russian. Through BCIRA 38: 729 (1958). (412)

The starter described can be fitted on all types of looms, as well as on other machines.

PROBLEM OF SPEED CHANGES ON THE LOOM. A. Liniecki. Przeg. Wlok. 12, No. 5/6: 276-280 (1958). In Polish. Through BCIRA 38: 729 (1958). (413)

The method of calculating the momentary speed of loom shafts from changes in the kinetic energy of the main mechanisms is described. Knowing the kinetic system of these mechanisms and the inertia of the masses, a differential equation for the kinetic energy variations can be worked out, the solution of which gives the course of the angular velocity of the main shaft and makes it possible to adjust the values of the masses so as to obtain the desired loom speed.

A NEW WEFT FEELER CONSTRUCTION WITH PERIODIC ACTION. A. I. Lavrenkov. Tekstil. Prom. 18, No. 4: 55-56 (1958). In Russian. Through BCIRA 38: 729 (1958). (414)

JACQUARD MECHANISMS IN CARPET WEAVING. PART 2. A. Crossland. Textile Recorder 76: 52-55, 60 (Jan. 1959). (415)

The operation of the Gripper Axminster, wire jacquards, double-face jacquards, and the floating lift Wilton jacquard is described. Diagrs, photos.

WEFT FEELER WITH PHOTOELECTRIC CELL. P. Bouvard. Industrie Textile: 457-458 (June 1958). In French. Through BCIRA 38: 700 (1958). (416)

The weft feeler described operates on the principle of a light beam passing through the pirn and, when the latter is empty, falling on to a photoelectric cell which causes the loom to stop. The robust photoelectric cell is mounted in plastic material directly on the loom frame.

FINDING LOOM-STOP CAUSES FROM WARP TENSIONS. Textile Inds. 123: 64-65 (Jan. 1959). (417)

The mill use of a portable device which analyzes the tension patterns in the warp of a loom to disclose poor work symptoms is described. Graphs.

SELVAGE PROBLEM IN SHUTTLELESS WEAVING. P. Baudry. Industrie Textile: 449-450 (June 1958). In French. Through BCIRA 38: 700 (1958). (418)

CHOICE OF OPTIMUM AIR CONDITIONS IN THE WEAVING MILL. V. Ya-Davydov. Tekstil. Prom. 18, No. 4: 43-45 (1958). In Russian. Through BCIRA 38: 729 (1958). (419)

Experiments showed that the moisture content of the web on the loom increased within 30 min from 5 to 9.5% at a relative air humidity of 80% and air velocity of 0.38 m/sec. The time depends upon the type of fabric and loom construction. In the range of 40-80% rh, the tensile strength remained almost constant, whereas the elongation was only constant in yarns sized with sodium silicate. An increase in relative humidity had an adverse effect on the weaving process. A method is described for calculating the optimum humidity conditions in the weaving room.

Knitting C3

TIPS FOR LEARNER-KNITTERS. PART 1. T. Powell. Textile Inds. 123: 119-121 (Jan. 1959). (420)

Knitting pointers for use as training aids and as refreshers for veteran knitters.

LENGTH CONTROL OF BAN-LON KNITTED GARMENTS. K. Mamnicki. Hosiery Trade J. 66: 84-85 (Jan. 1959). (421)

Stitch length measurement, using the yarn length counter developed by Hosiery & Allied Trades Research Assoc., is described.

AUTOMATIC LOOP TRANSFER ON FLAT PURL MACHINES: STOLL LIUM. J. B. Lancashire. Hosiery Trade J. 66: 70-73 (Jan. 1959). (422)

Features and operation of the LIUM machine (H. Stoll & Co., Germany) are described. Photos, diagrs.

Fabrics C4

CLEANING PAPER MACHINE WOOLEN FELTS WITH NEOVADINE AL. Ciba Ltd. Ciba Rev. 11: 29 (Nov. 1958). (423)

Directions are given for use of Neovadine AL for regular wash-ups and cleaning on running machines of woolen felts in board and fine paper mills.

RELAXATION SHRINKAGE. R. W. Moncrieff. Wool Record 94: 1577-1580 (Dec. 25, 1958). (424)

Problems and causes of relaxation shrinkage are briefly discussed, particularly in relation to wool. 4 refs.

LAMINATED PLASTICS: INCLUDING HIGH-PRESSURE AND LOW-PRESSURE TYPES AND REINFORCED PLASTICS. D. J. Duffin and C. Nerzig. Reinhold Pub. Corp., N.Y. 1958. 254 p. $5.75. (425)

Laminated plastics are discussed under the headings: introduction, chemistry and properties of resins, base materials and reinforcements, manufacturing processes, grades and characteristics of high-pressure laminates, machining of laminated plastics and molded parts, heat-resistant and other special laminates, and applications and end products. Appendixes give history, list of manufacturers, U.S. trade names, and a glossary of terms.

TESTS OF TWO NO-IRON SHEETS. Consumer Repts. 24: 60-61 (Feb. 1959). (426)

Two brands of resin-treated all-cotton sheets and pillowcases were laundered 45 times. Although not so smooth as ironed sheets and pillowcases, both brands were so much less wrinkled than unironed conventional bed linens that it was considered that only a very fastidious person would be dissatisfied with them. Photos.

BLANKETS OF GLASS. Famco Inc. Rohm & Haas Reptr. 16: 2-6 (Nov.-Dec. 1958). (427)

The manufacture of glass fiber mats is described. Photos.

KNITTED FABRICS FOR BRUSHING. J. B. Lancashire. Hosiery Times 32: 14-16 (Jan. 1959). (428)

The main procedures used in knitting fabrics intended for brushing are described briefly. Photos.

METALLIC THREADS INCREASE DESIGN POSSIBILITIES IN TERRY TOWELS. T. Hargreaves. Textile Mfr. 84: 610-614 (Dec. 1958). (429)

Techniques for exploiting the decorative properties of metallic yarns while eliminating any harsh feel are described, using jacquard and alternating diagonal designs as examples.

PORTOLITE FLEXIBLE TANKS FOR TRANSPORT AND STORAGE. Marston Excelsior Ltd. Fibres 20: 34 (Jan. 1959). (430)

Portolite tanks are made from coated strong woven high-tenacity rayon fabrics. Bulk liquids can be conveyed by normal road, rail, or water transport, and on the return journey the empty tank can be rolled up into a small bundle and the full load space used for other cargo.

FELT. Ciba Ltd. Ciba Rev. 11: 2-25 (Nov. 1958). (431)

What is felt?, p. 2-3; Manufacture of wool felt, p. 4-16; Measuring tests used for mechanical felts, p. 17-20; Felt in unexpected places, p. 21-22; Feltmaking: an immemorial art, p. 23-25. Photomicrographs, photos, 35 refs.

CARPET LAYING AND ESTIMATING HANDBOOK. D. J. Duffin (Am. Carpet Inst.). D. Van Nostrand Co., Princeton, N.J. 1959. 216 p. $4.50. (432)

HEAT-SHAPING DYNEL FABRICS. Fibres 20: 35 (Jan. 1959). (433)

The heat-shaping of Dynel fabrics by plug molding and by vacuum forming is described and illustrated by photographs.

GAUZE SELVAGE, BROCADED GAUZE, GAUZE WOVEN BY SHAFTS. E. O. Hesse. Spinner u. Weber 76, No. 12: 732-734; No. 13: 769-772; No. 18: 1105-1107 (1958). In German. Through BCIRA 38: 669 (1958). (434)

TAKING THE HEADACHES OUT OF LENO WEAVING. Skinner's Silk & Rayon Record 33: 36-37 (Jan. 1959). (435)

The contrary crossing leno construction (i.e. alternating right-hand and left-hand leno) described eliminates both the easer and shaker motions. The technique is confined to leno heddles with needles with eyelets. Diagrs, photomicrographs.

NONWOVEN FABRICS. K. Klein. Z. ges. Textil-Ind. 60, No. 12: 530-533 (1958). In German. Through BCIRA 38: 669 (1958). (436)

The production of nonwoven fabrics (preparation of the web, bonding, and finishing) is described and their properties, uses, and future prospects are discussed. 15 refs.

MODERN CARPET MANUFACTURE. A. Crossland. Columbine Press, Manchester, England. 1958. 176 p. $2.95. (437)

Carpet manufacture is discussed under the headings: historical survey, carpet yarns, dyeing, preparatory processes, elementary fabric construction, design and color, Wilton carpet, spool Axminster, gripper Axminster, chenille Axminster, double-carpet weaving, color-finding and laboratory work, finishing, problems of carpet manufacture, and nonwoven carpets.

FIBER STRUCTURE OF COARSE DENIER VISCOSE STAPLE FIBERS AND THEIR EFFECT ON THE WEAR VALUE OF CARPETS. H. Nuding. Textil-Praxis 13, No. 9: 889-891 (1958). In German. Through BCIRA 38: 710 (1958). (438)

Experiments, carried out on the highly-crimped skin fiber Phrix SKN and the skinless round fiber Phrix STR, showed that the sum of the positive fiber properties required for carpets is greater in the case of highly-crimped skin fibers than in skinless round fibers. These results were confirmed in practice.

FINISHING AND CHEMICAL PROCESSING D

CHEMISTRY AND PRACTICE OF FINISHING TEXTILE FABRICS. C. S. Whewell (Leeds Univ.). Can. Textile J. 75: 37-45 (Dec. 26, 1958). (439)

The mechanisms and techniques of setting, scouring, milling and felting, semi-decating and pressing, pilling prevention, resin finishing, and modification of dye affinity are reviewed. Tables, graphs, 15 refs.

RECOMMENDED DYEING AND FINISHING PROCEDURES FOR DACRON TYPE 64. Am. Textile Reptr. 73: 27, 73-74 (Jan. 15, 1959). (440)

Drying and finishing procedures are discussed and suggestions for scouring, spot removal, drying, and heat setting are given.

DYEING AND FINISHING FABRICS KNITTED FROM MODIFIED YARNS. D. L. Munden and S. M. Jaeckel (Hosiery & Allied Trades Research Assoc.). Dyer 121: 60-61 (Jan. 2, 1959). (441)

The effects of variations in yarn production and knitting on finishing and dyeing are briefly discussed. The importance of an initial wet relaxation process prior to finishing and careful temperature control in dyeing is emphasized.

HAT FINISHING. E. Rickenbacher (Ciba Ltd). Ciba Rev. 11: 27-28 (Nov. 1958). (442)

The finishing operations used for wool and fur felt hoods are briefly outlined.

FINISHING DEVELOPMENTS DURING 1958. Textile Weekly 58(2): 1778, 1781-1782 (Dec. 19, 1958). (443)

Includes references to the literature.

NEW DYEING AND FINISHING PROCESSES. B. C. M. Dorset. Textile Mfr. 84: 626-630 (Dec. 1958). (444)

This review of recent developments covers: flameproofing viscose rayon by incorporating in the fibers, during manufacture, a substance which can later combine with metal compounds having good flameproofing properties (BP 795 133); pinonic acid mixed with butyl cellosolve as wetting agent for mercerizing liquors; direct manufacture of polyamide, polyester, and polyacrylonitrile fibers having antistatic properties (BP 796 800); waterproofing cotton with alkali metal siliconates (BP 796 141); new dye types for Orlon; and new dyes which are applicable in weakly acid dye liquors to wool particularly and also to nylon and polyurethane fibers (BP 796 330).

Chemical processes D1

CREASEPROOFING IN THE FORM OF RECIPES. R. Günther. Z. ges. Textil-Ind. 60, No. 14: 659-662; No. 15: 688-694 (1958). In German. Through BCIRA 38: 677 (1958). (445)

The author gives some permanent creaseproofing compositions based on urea-formaldehyde precondensates, melamine resins, dialdehyde, glyoxal, etc. (together with directions for their application), and reviews methods for testing the crease-resistance, resin deposition, uniformity of the resin finish on fabrics, washfastness of the silk finish, fishy odor, tensile strength, and abrasion resistance.

DURABLE MOTHPROOFING OF WOOL: NEW AND INEXPENSIVE METHODS USING DIELDRIN. Wool Bureau, Inc., Dept. of Science and Technology, 16 West 46 St., New York 36, N.Y. 1958. 4 p. Wool science and technology report no. 2. Free. (446)

ALGINATES IN THE TEXTILE INDUSTRY. PART 4. USE OF ALGINATES IN FINISHING AND SIZING. H. Schulzen. Z. ges. Textil-Ind. 60, No. 14: 656-658 (1958). In German. Through BCIRA 38: 677 (1958). (447)

The properties of alginates (film formation, ability to form insoluble or difficulty-soluble complexes with bi- or trivalent metal ions, excellent penetrability, adhesion, stability of the solutions, good suspending power, etc.) are discussed, with reference to their use in non-permanent and permanent finishes and as sizing agents (alone or in combination with starch).

WATER-REPELLENT FINISHES: MODERN USE OF SILICONES. G. W. Madaras (Silicone Processes Ltd). J. Soc. Dyers Colourists 74: 835-841 (Dec. 1958). (448)

Recent developments in the application of silicones to textiles are discussed. Advantages as well as shortcomings of treatments from organic-solvent solutions and aqueous emulsions are outlined. The importance to the industry of low-temperature-curing silicone compositions is stressed, and the function of organometallic titanium compounds in bringing about low-temperature catalysis is explained. Tables, 2 refs.

REVIEW OF FLAMEPROOF FINISHES FOR TEXTILES WITH SPECIAL REFERENCE TO THE THPC TREATMENT AND OTHER METHODS ON PHOSPHORUS BASIS. J. R. W. Perfect. Textil-Rundschau 13, No. 8: 464-469 (1958). In German. Tinctoria 55, No. 4: 121-126 (1958). In Italian. Through BCIRA 38: 677 (1958). (449)

ANTIMONITES IN FLAMEPROOFING OF TEXTILES. M. P. Khera, R. M. Desai, and M. G. Bhargava. J. Sci. Ind. Research (India) 17: 452-454 (Nov. 1958). (450)

A new flameproofing treatment for cellulosic fabrics using alkali-antimonite is described which requires no special acid resistant or baking equipment. The treatment imparts washfast flameproofness to the fabric without any adverse effect on tensile or tear strength and air or water vapor permeability. In addition, it imparts a certain measure of rot resistance without accelerating actinic degradation. Tables, 18 refs.

FLAMEPROOFING OF TEXTILE FABRICS WITH PARTICULAR REFERENCE TO THE FUNCTION OF ANTIMONY COMPOUNDS. N. J. Read and E. G. Heighway-Bury (Associated Lead Mfrs. Ltd). J. Soc. Dyers Colourists 74: 823-829 (Dec. 1958). (451)

Some modern flameproofing processes are outlined, and the requirements of an ideal process discussed together with some methods of testing flameproofness and durability. The importance of ease of ignition as distinct from rate of burning as a fire hazard is referred to. The action of antimony oxide in association with hydrogen chloride liberated at ignition temperature is examined, and an experimental demonstration of the mechanism of the flameproofing effect of antimony chloride is described. The preparation, application, and performance of oil-in-water emulsions of plasticized polyvinyl chloride are discussed, and evidence of possible side-effects of the composition and antimony oxide is supplied. Tables, 10 refs.

FLAME-RESISTANT FINISHING OF CELLULOSIC FABRICS WITH PHOSPHORUS-CONTAINING RESINS. J. R. W. Perfect (Proban Ltd). J. Soc. Dyers Colourists 74: 829-834 (Dec. 1958). (452)

Methods of using phosphorus-containing compounds to produce durable flame-resistant finishes on cellulosic fabrics are discussed. Reference is made to finishes based on the use of amine-phosphate-formaldehyde resins, esterification methods, phosphorylamide compounds, tetrakishydroxymethylphosphonium chloride (THPC) resins, triallyl phosphates, and aziridinyl-phosphines. Particular mention is made of the commercially successful Proban finish, which is based on the use of THPC. A brief summary is given of suggested mechanisms for the flame- and glow-proofing action of phosphorus compounds. 34 refs.

MOTHPROOFING AGENTS CONTAINING ACID AMIDE GROUPS. H. Martin. Textil-Rundschau 13, No. 8: 439-457 (1958). In German. Through BCIRA 38: 678 (1958). (453)

Thirty-one literature and patent references to the chemistry and biological activity of mothproofing agents containing acid amide groups are reviewed.

PERMANENT MOTHPROOFING OF WOOL WITH DIELDRIN. L. E. Mitchell and A. Williams (Shell Chem. Corp.). Am. Textile Reptr. 73: 23-25, 74 (Jan. 15, 1959). (454)

Results of studies on the following aspects of mothproofing with dieldrin are presented: (1) the amount of dieldrin that will provide permanent mothproofing, (2) the practicability of applying dieldrin to wool in a dyebath without introducing an extra step in the dyeing process, and (3) the fastness of dieldrin.

BLEACHING ANIMAL FIBERS. Paterson Bleachery & Chemicals, Inc. Rohm & Haas Reptr. 16: 8-11 (Nov.-Dec. 1958). (455)

Practices in bleaching a wide variety of unusual animal fibers at the Paterson Bleachery are briefly described. Photos.

EFFECT OF THE pH AND TEMPERATURE OF THE MEDIUM ON THE RATIO OF ACTIVE OXIDIZING AGENTS IN HYPOCHLORITE SOLUTIONS IN CHLORINATION AND BLEACHING PROCESSES. I. E. Flis. Zhur. Priklad. Khim. 31, No. 8: 1194-1201 (1958). In Russian. Summary in BCIRA 38: 671 (1958). (456)

RECENT PROGRESS IN CHLORITE BLEACHING. R. Borezee and M. Chary. Teinture et Apparets No. 45: 81-88 (Apr. 1958). In French. Through BCIRA 38: 671 (1958). (457)

Bleaching methods are reviewed. 43 refs.

CATALYSIS AND ACTIVATION OF BLEACH LIQUORS. Textile Mfr. 84: 597-600 (Dec. 1958). (458)

In this review of the literature, the author examines the activation of hypochlorite, chlorine, perborate, and peroxide bleach baths in the presence and absence of catalysts. 9 refs.

BLEACHING OF BLANKETS. G. C. Woodford. Dyer 120: 867 (Dec. 5, 1958). (459)

The use of Stabilizer MP, based on acid fluorides, is recommended in the acid/hydrogen peroxide bleaching of blankets. Details of the process are covered.

COTTON BLEACHING WITH PEROXIDE. K. Weible. Reply: L. Chesner. (Letters to the editor). J. Soc. Dyers Colourists 74: 860 (Dec. 1958). (460)

NEW OPEN-WIDTH EQUIPMENT FOR SODIUM CHLORITE BLEACHING. M. Meunier. Teinture et Apprets No. 45: 89-90 (Apr. 1958). In French. Through BCIRA 38: 671 (1958). (461)

The machine described makes it possible to impregnate the fabric in two stages with sodium chlorite and the activator, respectively. The chlorite bath can be preserved without inconvenience for as long as desired. The perfectly stable first bath, containing only the cold sodium chlorite without activator, does not liberate chlorine dioxide, and it is not necessary to use a more concentrated solution so as to compensate for a premature decomposition such as that occurring when acid chlorite is used. All parts subjected to corrosive vapors and all rollers in contact with the fabric impregnated with activated chlorite are made of or protected by suitable plastic materials. Other advantages of the machine are enumerated.

NYLON LACE SCOURING. W. E. Aldrich (Linwood Lace Mills). Textile World 109: 76-77 (Jan. 1959). (462)

The use of an emulsion containing a waxy ethyleneglycol fatty-acid ester antistatic agent and an oily alkyl-aryl quaternary ammonium antistatic agent as a lubricant for nylon yarn reduces the pickup of graphite by nylon lace and reduces the scouring time 30%. Graphs.

TEXTILES AND THE DRYCLEANER. A. E. Johnson (Nat. Inst. of Drycleaning). Can. Textile J. 76: 55-62 (Jan. 9, 1959). (463)

Following a description of modern drycleaning practices, the effects of drycleaning on shrinkage, colorfastness, and on finish retention are discussed. The principal types of complaints are explained, and testing procedures for determining performance in drycleaning are suggested. Graphs.

PERMANENT LUSTERING OF ALL-WOOL FABRICS. J. B. Speakman and M. A. Wolfram (Leeds Univ.). (Letter to the editor). J. Textile Inst. 49: T627 T628 (Nov. 1958). (464)

Permanent luster is obtained by treating fabric containing combined sulfur dioxide with ethylene glycol and water followed by heat and pressure.

USE OF ORGANIC ISOCYANATES AS TEXTILE PRODUCTS. M. Lefournier. Industrie Textile: 461-466 (June 1958). In French. Through BCIRA 38: 704 (1958). (465)

The uses of polyisocyanates and polyurethanes in textile finishing are reviewed, with reference to the relevant patent literature.

BRITISH TEXTILE CHEMICALS. PART 5. Skinner's Silk & Rayon Record 33: 43-44 (Jan. 1959). (466)

Alphabetical list of British textile chemicals which have appeared on the market in the past year.

EFFECT OF FOLDING IN FINISHED COTTON FABRICS. F. Nestelberger. SVF Fachorgan Textilveredlung 13, No. 8: 485-491 (1958). In German. Through BCIRA 38: 682 (1958). (467)

The difficulties in, and means for, removing folds and creases in resin-finished fabrics stored for prolonged periods in the folded and rolled-up state (the folds being fixed by post-condensation) are discussed. 27 refs.

SUGGESTED NEW MECHANISM FOR THE DEGRADATION OF WOOL CYSTINE IN ALKALINE SOLUTION. R. L. Elliott, R. S. Asquith, and M. A. Hobson (Inst. of Technol., Bradford). (Letter to the editor). J. Soc. Dyers Colourists 74: 859-860 (Dec. 1958). (468)

PARTIAL ACETYLATION OF COTTON: PRELIMINARY COST STUDIES. H. K. Gardner and others (So. Reg. Research Lab.). U. S. Agri. Research Serv., Washington 25, D. C. Oct. 1958. 13 p. ARS-72-13. Free. (469)

This paper gives investment costs, operating expenses, and estimated service charges and break-even points at two profit levels for hypothetical partial acetylation installations. The estimated manufacturing cost for partially acetylating cotton yarn to 15% acetyl content in a continuous process, involving processing about 54 million pounds of scoured yarn annually with reasonable chemical recovery, is 14.2¢/lb of product. Diagrs, tables, 8 refs.

CONTINUOUS DESIZING AND BLEACHING OF COTTON PIECE GOODS ON THE MONFORTS REACTOR. H. Bonanni. Z. ges. Textil-Ind. 60, No. 19: 866-869 (1958). In German. Through BCIRA 38: 731 (1958). (470)

The new open-width washing machine Cascade (developed by Joh. Kleinewefers Söhne, Krefeld), which can be operated at speeds of over 100 m/min and requires less than half the water consumed by the usual machines, can be combined with the Monforts Reactor to be used in continuous desizing and bleaching of cotton piece goods.

Dyeing and printing D2

DYEING NAVY BLUES ON WOOLEN AND WORSTED PIECE GOODS. A. Ellis. Textile Recorder 76: 56-57, 65 (Jan. 1959). (471)

Some of the practical problems of producing accurate navy blue shades on wool fabrics are discussed, and suitable dyestuffs are suggested.

PRODUCTION OF DISCHARGEABLE BRILLIANT TURQUOISE AND BRILLIANT GREEN DYEINGS. R. Merz. Spinner u. Weber 76, No. 12: 736-737 (1958). In German. Through BCIRA 38: 676 (1958). (472)

Three methods, applicable to cotton, rayon, and spun-rayon fabrics, are described, with reference to suitable dyes.

DYEING OF DRALON WITH ASTRAZON AND ASTRA DYES. H. Blättermann and R. Koch. Z. ges. Textil-Ind. 60, No. 11: 477-480; No. 12: 537-539 (1958). In German. Through BCIRA 38: 674 (1958). (473)

A method for dyeing fabrics from Dralon/cellulosic fiber blends is described, in which the Dralon (polyacrylonitrile) fiber is dyed with Astrazon or Astra dyes, while the cellulosic component (Cuprama, viscose rayon staple, cotton) is treated either with light-fast substantive (Sirius) or with Indanthrene dyes, leaving the Dralon fiber practically white or only slightly colored. A list of these dyes is given and reference is also made to dyeing Dralon/wool fabrics by a two-bath and a single-bath two-stage method, respectively, in which Dralon is dyed with the above cationic dyes and the wool with metal complex or acid dyes. The fastness properties of Astrazon and Astra dyes on Dralon are tabulated, and dyeing of Dralon high-bulk yarns and knitted fabrics is outlined.

DYEING OF POLYAMIDE FIBERS WITH SULFUR AND INDOCARBON DYES. W. Titzka and C. Klopfstock. Textil-Praxis 13, No. 9: 925-927 (1958). In German. Through BCIRA 38: 702 (1958). (474)

The method described for the application of Immedial dyes (based on the principle of tannin mordants) gives excellent tone-in-tone dyeings on fabric blends from cotton and polyamide fibers. The dyeings exhibit high fastness properties. When using Indocarbon dyes according to a modified method (originally designed for pure cellulose fibers), dyeings with high light- and wet-fastnesses and very good dry and wet crocking fastness are obtained on Helanca yarns. These dyeings are stable during the thermofixing process.

COVALENTLY BOUND AZO DYES. R. R. McLaughlin (Univ. of Toronto). (Letter to the editor). J. Soc. Dyers Colourists 74: 857-858 (Dec. 1958). (475)

A method of obtaining insoluble azo dyes which are covalently bound to cellulose is described. 4 refs.

PIECE-DYEING BLENDS OF ORLON WITH DACRON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Jan. 1959. 2 p. Bull. X-97. Free. (476)

A new time-saving method is described using Latyl A carrier and a single bath.

CONTINUOUS DYEING IN FAVOR OF PAD-JIG PROCESS. K. B. Parekh. Indian Textile J. 69: 38-41, 33 (Oct. 1958). (477)

Comparison is made of the du Pont pad-steam process, the BASF wet steam process, the Standfast molten metal process, and the pad-jig process. Table.

DYEING OF CELLULOSIC FIBERS WITH REMAZOL DYES BY THE EXHAUSTION METHOD. H.-U. Von der Eltz. Z. ges. Textil-Ind. 60, No. 11: 472-474 (1958). In German. Through BCIRA 38: 673 (1958). (478)

Properties of the dyes (Farbwerke Hoechst AG) are discussed and the exhaustion method for dyeing with Remazol dyes on the jig and winch beck, and in open vats or the Gerber or Mezzera dyeing machine, is described.

REACTIVE DYES AND THE PAD-ROLL PROCESS. T. Vickerstaff. Z. ges. Textil-Ind. 60, No. 11: 463-468 (1958). In German. Through BCIRA 38: 673 (1958). (479)

Laboratory and practical dyeing experiments showed that the pad-roll process ensures very good results when using the highly-reactive Procion dyes. Minimum liquor ratios can be used and best results are obtained at low temperature (room temperature). A dyeing time of 2 hours at 60° C is sufficient to bind the dye chemically, if sodium bicarbonate (10-20 g/l) is used as alkali. If the same amount of soda is used, the temperature can be lowered from 60 to 20° C (the dyeing time being the same). Additional equipment is not necessary.

NEW METHOD FOR DYEING WITH FINELY DISPERSED VAT DYES ON THE WINCH BECK. M. Peter and A. Litzler. SVF Fachorgan Textilveredlung 13, No. 8: 482-483 (1958). In German. Through BCIRA 38: 673 (1958). (480)

The method for the application of microdisperse Cibanone dyes by using Ciba VP stabilizer has been successfully used for dyeing knitted goods in the winch beck. Directions are given.

HIGH TEMPERATURE DYEING OF VEGETABLE FIBERS WITH SUBSTANTIVE DYES. E. Herrmann. Z. ges. Textil-Ind. 60, No. 19: 862-865 (1958). In German. Through BCIRA 38: 732 (1958). (481)

It has been found that high temperature dyeing of vegetable fibers with substantive dyes can be used only for special purposes (e.g. dyeing of rayon spinning cakes) and that adequate levelness and improved dye penetration are often obtained at temperatures below 120° C (105 or 110° C). Taking into account these findings, the author summarizes laboratory and practical experiences, referring especially to the stability of substantive dyes, their affinity at temperatures above 100° C, the choice of dyes, and fiber sensitivity to high temperature dyeing.

DYEING FUR FELT HOODS WITH CIBALAN DYES. Ciba Ltd. Ciba Rev. 11: 26 (Nov. 1958). (482)

A dyeing procedure and Cibalan dyes found suitable for the bulk working of hoods are noted.

PREMETALIZED DYES IN CARPET DYEING. W. I. Wygand (E. I. du Pont de Nemours & Co.). Am. Textile Reptr. 73: 13, 64 (Jan. 15, 1959). (483)

The pack dyeing procedure for hard twist yarns and the piece dyeing of tufted carpets with Capracyl dyes are described.

DYEING KNITTED GOODS WITH CIBACRON DYES. Ciba Ltd. Ciba Rev. 11: 30-32 (Nov. 1958). (484)

Directions for winch dyeing of cotton and spun and filament viscose knitted goods are given.

HOW TO PRINT ANILINE BLACK SUCCESSFULLY. M. Mackay. Textile World 109: 73 (Jan. 1959). (485)

Tips on preparing and running aniline black with a minimum of trouble are given.

INFLUENCE OF PREPARATORY TREATMENTS ON DYEING. Dyer 121: 27-30 (Jan. 2, 1959). (486)

At every stage of preparatory treatment for subsequent dyeing, there are factors which are detrimental to the application of dyestuffs. Singeing, desizing, washing, alkali-boiling, and bleaching all contribute to the final result, and some of the adverse influences which may arise are outlined and discussed. 6 refs.

INFLUENCE OF FIBER TYPES ON DYEING METHODS. J. S. Ward (Courtaulds Ltd). J. Soc. Dyers Colourists 74: 813-823 (Dec. 1958). (487)

An account is given of the many factors which influence the dyeing method adopted for a particular fibrous material. Some of these factors, such as the diffusion rate and the affinity of dyes, are fundamental; others, such as the colors required or variability in dyeing properties, are accidental; while many, such as the volume of business or the cost of dyes, are dependent upon the economic structure of the industry. All must be accommodated in a successful dyeing process. Graphs, tables, 10 refs.

ABSORPTION OF CHRYSOPHENINE G BY COTTON: A TEST OF QUANTITATIVE THEORIES OF DIRECT DYEING. F. H. Holmes (Shirley Inst.). Trans. Faraday Soc. 54: 1172-1178 (Aug. 1958). (488)

The investigation of the equilibrium absorption of Chrysophenine G by cotton was extended to a wide range of salt/dye ratios in the dyebath. The results do not agree with the predictions of a current quantitative theory of the direct dyeing of cellulose. Graphs, 16 refs.

ABSORPTION SPECTRA AND THE SUBSTANTIVITY TO COTTON OF CONGO RED AND RELATED STRUCTURES. F. H. Holmes (Shirley Inst.). Trans. Faraday Soc. 54: 1166-1171 (Aug. 1958). (489)

The effects of substitution in the 3:3'- and in the 2:2'-positions in the diphenyl nucleus were investigated by means of measurements of the ultraviolet and visible absorption spectra (in solution) of Congo Red, its chlorine- and bromine-disubstituted derivatives, and the corresponding monoazo half-structures. Graphs, table, 14 refs.

CHITOSAN AND ITS USE AS THICKENER IN PIGMENT DYE PRINTING. C. Weimann. Teintex 23, No. 8: 558-564 (1958). In French. Through BCIRA 38: 676 (1958). (490)

New details are given of the preparation and properties of Chitosan and its use in printing pastes.

COLLOIDAL FACTORS IN TEXTILE PIGMENT PRINTING EMULSIONS. E. Nelson (Ansbacher-Siegle Corp.). Am. Dyestuff Reptr. 48: 1-4, 36 (Jan. 12, 1959). (491)

The purpose of this paper is to survey only the most important formulation factors common to pigment printing emulsions. The primary requirements to be met by manufacturers are listed. The fundamental components of emulsion pigment printing systems are discussed, as are the colloidal theories of emulsions. Tables, 15 refs.

ADSORPTION AT ORGANIC SURFACES. PART 5. STUDY OF THE ADSORPTION OF DYES AND OTHER ORGANIC SOLUTES BY CELLULOSE AND CHITIN. C. H. Giles and A. S. A. Hassan (Royal Coll. of Science & Technol., Glasgow). J. Soc. Dyers Colourists 74: 846-857 (Dec. 1958). (492)

Adsorption experiments with cellulose and chitin and a variety of solutes, including nonionic hydroxy compounds, aromatic sulfonic acids, and azo dyes, are described. In nonaqueous solvents the nonionic compounds are adsorbed by both substrates, but in water they are adsorbed only by chitin. Almost all the sulfonated compounds are adsorbed by both substrates, but benzenesulfonic acid is not adsorbed by cellulose. Graphs, tables, 32 refs.

ILMA DYEING EQUIPMENT FOR DYEING AT HIGH TEMPERATURE AND UNDER STATIC PRESSURE. Teintex 23, No. 5: 357-363 (1958). In French. Through BCIRA 38: 675 (1958). (493)

A series of machines operating at high temperature and under static pressure (developed by the Italian firm Ilma, Schio) is described. These Ilma machines are designed for dyeing cylindrical or conical yarn bobbins, card sliver bobbins or beams, loose fiber, cakes, fabrics, hanks, and for laboratory test.

NEW CONTINUOUS PAD-STEAM AND DEVELOPING INSTALLATION. H. Dahm. Z. ges. Textil-Ind. 60, No. 19: 869-871 (1958). In German. Through BCIRA 38: 731 (1958). (494)

The new Benteler pad-steam and developing installation described consists of three parts: a horizontal 2-roller padder, a curved rapid steamer, and an open-width washing machine. It can be used in the Colloresin process and in dyeing of long lengths.

DIRECT AND DISCHARGE PRINTING ON WOOL FELT HOODS. E. Meier (Ciba Ltd). Ciba Rev. 11: 26-27 (Nov. 1958). (495)

Procedures for obtaining printed effects by spray printing on wool felt with direct, acid, wool, Neolan, Cibalan, and Cibacron dyes, as well as for effecting white discharges, are described.

PRACTICAL COLOR MATCHING. F. Vogel. Spinner u. Weber 76, No. 17: 1034-1035 (1958). In German. Through BCIRA 38: 675 (1958). (496)

After a theoretical introduction, the author discusses the practice of color matching, types of lamps, color matching devices, and misinterpretation during color matching.

REACTIVE DYES. J. Wegmann. Textil-Praxis 13, No. 9: 936-940; No. 10: 1056-1061 (1958). In German. Through BCIRA 38: 702 (1958). (497)

In this review, the author discusses the dyeing principles (dyeing with dye-pigment particles and dyeing with dye molecules), the historical development of reactive dyes, proofs for the covalent linkage of these dyes with the fiber, characteristics of the dyes, reaction partners and reaction conditions, dyeing and printing with Cibacron dyes, and advantages and disadvantages of reactive dyes. 23 refs.

REACTIVE DYESTUFFS: A NEW METHOD OF APPROACH TO DYEING. I. D. Rattee (Imp. Chem. Inds. Ltd). Research 12: 15-20 (Jan. 1959). (498)

The development of dyeing and printing with classes of reactive dyes which chemically modify the fiber and give high fastness to wet treatments has introduced a new principal to the theory of dyeing mechanisms. The 60 years of research which have given rise to this development are reviewed and the chemistry and technological implications of the new dyes for protein and cellulosic fibers are discussed. Photomicrographs, 22 refs.

WOOL PIECE DYERS: COLOR MATCHING PROBLEMS. A. J. Carbone (Sandoz Inc.). Am. Textile Reptr. 73: 11, 76 (Jan. 5, 1959). (499)

The problems confronting the wool piece dyer in producing match-mated sweater and skirt ensembles are discussed. Graphs.

MAGOG STANDARDIZES PRINTING. PART 1. M. Ouellette (Magog Print Works). Textile Inds. 123: 56-58 (Jan. 1959). (500)

The Magog program for printing production establishes printing standards for patterns regardless of their complexity or difficulty in printing. This article is the first in a series which describes how the standards were developed and how they are used. Photos, tables.

Mechanical processes D3

RAISING OF WOVEN AND KNITTED FABRICS. N. Pilkington (Tomlinsons Ltd). Textile Recorder 76: 58-60 (Jan. 1959). (501)

The basic factors involved in the technology of raising are discussed, and the double action machine is considered in detail. A mathematical basis for the process is also outlined. Diagr, photo.

FINISHING OF CELLULOSE TRIACETATE FABRICS, WITH PARTICULAR REFERENCE TO SETTING, EMBOSSING, AND PLEATING. S. N. Bradshaw and A. S. Cluley (Courtaulds Ltd). J. Soc. Dyers Colourists 74: 842-846 (Dec. 1958). (502)

The purpose of this paper is to review and summarize knowledge of thermal finishing of fabrics containing Tricel, and an attempt has been made to define the reasons for the different methods in use and to specify the sequence of operations in processing.

NEW WORKING PRINCIPLE FOR SELVAGE SHEARING MACHINES. G. Boigs. Textil-Praxis No. 9: 947-948 (1958). In German. Through BCIRA 38: 701 (1958). (503)

Hand-trimming of the selvage has been eliminated by the development of the Menschner selvage shearing machine (model SRS) in which the principle of surface shearing machines is used for cutting off the selvage threads. Details are given of the machine construction.

PROBLEM OF ENERGY IN RAISING. A. Durand. Industrie Textile: 539-543 (July 1958). In French. Through BCIRA 38: 705 (1958). (504)

The mechanism of raising, energy consumed, and graphical calculation of the energy are discussed.

Drying, setting, conditioning D4

DRYING OF PAPER ON FELT-COVERED DRYING CYLINDERS. L. Janson and B. Nordgren. Svensk Papperstidn. 61, No. 19: 834-843 (1958). In Swedish. Through BCIRA 38: 734 (1958). (505)

Results are reported of an investigation into the drying process in a multicylinder installation. Temperature and humidity conditions of the felt and paper web were studied in particular, and heat transfer from steam to paper was determined, as well as the water evaporation rate in dependence of some variable factors.

MODERN DRYING MACHINES. R. Fahrbach. Textil-Praxis 13, No. 9: 893-898 (1958). In German. Through BCIRA 38: 705 (1958). (506)

The various combinations of the Fleissner dryer described differ from the usual drying installations in the introduction of several finely perforated cylinders arranged successively in one row.

TESTING AND MEASUREMENT E

SAMPLING PROCEDURES AND TABLES FOR INSPECTION BY VARIABLES FOR PERCENT DEFECTIVE: MILITARY STANDARD. U. S. Dept. of Defense, Washington, D. C. 1957. 110 p. MIL-STD-414, 11 June 1957. Order from Superintendent of Documents, Washington 25, D. C. 65¢. (507)

Sampling plans for known variability, unknown variability, using sigmas and ranges, including operating characteristic curves.

PLANNING OF EXPERIMENTS. D. R. Cox. John Wiley, New York, N. Y., 1958. 308 p. $7.50. (508)

Avoiding mathematics, the author relies on "intuitive reasonableness" to explain the features of various statistical designs of experiment, including randomized blocks, factorials, sequentials, and response surfaces. Over a dozen illustrations are from the textile field.

OPTICAL INSTRUMENTS AND THEIR USE IN TESTING AND RESEARCH LABORATORIES OF THE TEXTILE INDUSTRY. F. Walter. SVF Fachorgan Textilveredlung 13, No. 9: 537-547 (1958). In German. Through BCIRA 38: 737 (1958). (509)

Instruments required for the microscopical examination of raw materials and finished products (knitted and woven goods) are reviewed. 10 refs.

A CRITERION OF RANDOMNESS APPLICABLE TO TEXTILE TESTS. A. Arano and A. Barella. Investigacion e Informacion Textil 1, No. 1: 3-5 (1958). In Spanish. Through BCIRA 38: 679 (1958). (510)

A series of practical applications derived from the theory of repetitions is presented and it is shown that the criterion of randomness developed by the authors on the basis of this theory can be used in process control.

Fibers E1

PNEUMATIC IMPURITY TESTER FOR COTTON. Spinner u. Weber 76, No. 13: 760-761 (1958). In German. Through BCIRA 38: 680 (1958). (511)

The newly developed impurity tester described operates on the same principle as the Shirley Analyzer and corresponds to it also in its fundamental construction, but is more handy and can, therefore, be easily installed in the testing laboratory. The mechanism of the machine is based on the difference existing between the specific gravity of the fibers and that of the impurities. The sample is opened into individual fibers and conducted into a chamber with circulating air. The pure cotton and the mixture containing the impurities are exposed both to changes in direction and in the velocity of the air stream to separate the pure fibers from the impurities. The machine and method of testing, as well as evaluation of the results, are described.

FIBER TABLES: DIFFERENTIATION BETWEEN MATURE AND IMMATURE OR DEAD COTTON. P.-A. Koch. Z. ges. Textil-Ind. 60, No. 11: 457-463 (1958). In German. Through BCIRA 38: 680 (1958). (512)

Microscopical identification characteristics of the fibers are described and a table is given listing the differences between the cotton fibers during various stages of their development, as revealed by microscopical examination and staining reaction. Methods for determining the maturity of a cotton, and for analyzing cotton neps as regards their origin are reviewed. 60 refs.

QUANTITATIVE SEPARATION OF WOOL AND REGENERATED CELLULOSE FIBERS BY SODIUM HYPOCHLORITE. M. Kehren and C. Maurer. Z. ges. Textil-Ind. 60, No. 17: 766-769; No. 18: 810-813 (1958). In German. Through BCIRA 38: 738 (1958). (513)

The suitability of the method proposed by Druce for the analysis of mixtures of protein and nonprotein fibers (see TTD 13: 315/56) was examined on fiber and fabric blends from wool and viscose rayon or wool and Cupra fiber. The method, based on the oxidative degradation and complete destruction of wool by 1N sodium hypochlorite (35.46 g active chlorine/l), is described in detail and compared with the potassium hydroxide method. The correction factor (for the weight loss of cellulose fibers during the treatment) was calculated as 1.007.

IDENTIFICATION OF CHEMICAL FIBERS BY THE EMBEDDING METHOD ON THE KOFLER HEATING STAGE. R. Fischer and T. Kartnig. Z. ges. Textil-Ind. 60, No. 19: 830-832 (1958). In German. Through BCIRA 38: 738 (1958). (514)

The fiber to be tested is placed in a suitable nonvolatile liquid whose refractive index at 20° C is slightly higher than that of fibers with highest refractivity. By heating the fiber in the liquid, the refractive index of the liquid is lowered and reaches finally that of the fiber so that the fiber is no longer visible (Becke line). The Kofler heating stage on which the temperature is determined (fiber and liquid are between the specimen holder and cover glass) is fixed on the polarization microscope and the embedded fiber can be adjusted parallelly or vertically to the oscillation direction of the polarizer and the Becke line observed in monochromatic light. Thirty-six different fibers were identified by this method.

ESTIMATION OF THE FINENESS AND STRENGTH OF COTTON FROM MEASUREMENTS OF MATURITY MADE BY THE COTTON GRADER. V. Dischka (Textile Research Inst., Budapest). J. Textile Inst. 49: T631-T645 (Dec. 1958). (515)

An accurate rapid method for the determination of the degree of maturity of cotton, which depends on the birefringency of the cell-wall, is described. The specific birefringency is a characteristic feature common to samples of cotton of the same breed. When parallel cotton fibers are illuminated with plane-polarized light, the intensity of the transmitted beam can be used as a measure of the degree of maturity of the fiber. Examples of the results of tests, which can be made in a few minutes, and the derivation therefrom of fineness and breaking strength by means of tabulated data and graphs, are given. The results of the tests are claimed to be reproducible and independent of the moisture content of the fiber. The method is sensitive enough to detect small differences in maturity. The apparatus described has a wide field of application as the measured intensity of transmitted polarized light depends on the product of fineness (maturity) and birefringency. If one of these factors is known, the other can be calculated directly. Graphs, tables, 34 refs.

MICRONAIRE CURVILINEAR SCALE FOR DESI COTTON: EVALUATION AND RELIABILITY. F. A. Bhatty and S. A. Ansari. Pakistan Cottons 3: 1-11 (Oct. 1958). (516)

A method is described for adapting the micronaire for testing coarseness of Desi cottons. The essential features of the new technique are a new Desi curvilinear scale which can be mounted simply on the instrument parallel to the flow meter tube, and a new dual orifice appropriate to the scale. Graphs, tables, 2 refs.

MICROSCOPICAL DETECTION OF DAMAGES TO COTTON. P.-A. Koch. Z. ges. Textil-Ind. 60, No. 19: 832-838 (1958). In German. Through BCIRA 38: 738 (1958). (517)

The advantages of a microscopic mushroom-head reaction (see abstr. 2216/57) in detecting chemical damages to cotton are enumerated. This reaction permits differentiation between mechanical and chemical damages, even if the chemical substance is no longer detectable, e.g. removed by washing.

RAPID DETERMINATION OF THE MEAN BREAKING LOAD OF WOOL FIBERS FROM ONE BATCH BY MEASUREMENTS ON BUNDLES REMOVED FROM A COMBED SLIVER. M. Franck. Ann. Sci. Textiles Belges No. 2: 72-83 (June 1958). In French. Through BCIRA 38: 708 (1958). (518)

Results are reported of dynamometric tests carried out on fiber bundles, prepared by arranging the sample obtained by means of the Schlumberger Sampler on a velvety surface, taking care to preserve the position of the fiber ends in the same line. A 10-15 mm wide section of the fiber band is then removed to limit the weight of the bundle, and this section is rolled into a cylinder of parallel, not twisted, fibers. From this cylinder, a 2 cm length in the direction of the fibers (with all fiber ends in one line) is cut off and placed between the clamps of the dynamometer (Stein Statigraph) in such a manner that the sample breaks in the center. The breaking load is recorded in the diagram.

BEHAVIOR OF SYNTHETIC FIBERS TO VARIOUS ZINC CHLOROIODIDE SOLUTIONS. M. Stratmann. Z. ges. Textil-Ind. 60, No. 11: 450-456 (1958). In German. Through BCIRA 38: 681 (1958). (519)

It is shown that the different behavior of manmade fibers (polyamide, polyester, polyvinyl acetal, polyacrylonitrile, polyvinylidene cyanide, 2-1/2 acetate and triacetate fibers) to zinc chloroiodide solutions (embedding of the fiber sample in a mixture of zinc chloroiodide solution--according to Behrens/Merck--and ethanol) can be used as identification reaction for the respective fibers.

DETERMINATION OF THE FAT CONTENT IN TEXTILES. M. Kehren and E. Wichter. Z. ges. Textil-Ind. 60, No. 19: 860-861 (1958). In German. Through BCIRA 38: 737 (1958). (520)

Determination of the fat content in textiles (carried out by extracting the samples with a low-boiling organic solvent) gives, according to the solvent used, duration of the extraction and manner of calculation, great differences in the end values. Results are reported of tests carried out under varying conditions on roving and worsted, carded and carpet yarns, and all experts interested in this field are invited to express their views on, and submit suggestions for, clearing up this problem and working out a generally applicable extraction method.

STAINING OF FIBERS WITH TEST DYE SOLUTIONS IN THE QUALITATIVE ANALYSIS OF FIBERS. M. Stratmann. Z. ges. Textil-Ind. 60, No. 19: 839-841 (1958). In German. Through BCIRA 38: 737 (1958). (521)

Test dyeing of fibers and critical evaluation of the results are discussed. The study was carried out to ascertain the extent to which the individual fiber groups can be differentiated on the basis of the color shades obtained, and to find out whether shade differences within a fiber group would permit the identification of certain dye groups. From each group, the greatest possible number of representatives was examined. The method is described.

SIGNIFICANCE OF STRENGTH MEASUREMENTS EFFECTED ON FIBER BUNDLES WITH A CERTAIN TEST LENGTH. PART 2. G. Raes and T. Fransen. Ann. Sci. Textiles Belges No. 2: 48-71 (June 1958). In French. Through BCIRA 38: 707 (1958). (522)

In continuation of the previous article (see abstr. 3382/58), the authors study the interrelationship between certain fiber properties (length, elongation, fineness or maturity) and their strength. The results obtained in the laboratory on a great number of selected cottons are discussed and examined in the light of the theories of Hertel and the findings made previously by H. Wakeham and E. E. Berkley.

DEPENDENCE OF ELECTRICAL CONDUCTANCE OF HYGROSCOPIC FIBERS ON WATER CONTENT. J. Lehmann. Naturwissenschaften 45: 35-36 (1958). Through J. Appl. Chem. 8, Part 7: ii-103 (1958). (523)

An equation is derived relating the specific resistances of moist, dry, and saturated fibers, the degree of saturation of the intermicellar space, and the possible number of layers.

IDENTIFICATION OF DAMAGE TO LIGNIFIED FIBERS: NEW MICROSCOPICAL TEST USING IODINE AND SULFURIC ACID. F. S. Young and W. R. Hindson (Australian Defence Scientific Serv.). J. Textile Inst. 49: T554-T560 (Nov. 1958). (524)

A microscopical staining test for identifying the nature of damage to lignified fibers is described. Undamaged fibers are stained yellow, as are fibers that have suffered fungal damage or attack by acids or acid oxidizing solutions. The action of heat, light, weather, and alkaline oxidizing solutions gives fibers that take green or blue stains. By counting the fibers stained yellow, green, or blue, it is possible to determine the nature of damage to the fibers. To confirm fungal or acid damage, other information is required. Table, 6 refs.

Yarns E2

EVALUATION OF TWIST IN NYLON MONOFILAMENT. P. Larose. Reply: M. W. Astle-Fletcher. (Letters to the editor). J. Textile Inst. 49: T707-T709 (Dec. 1958). (525)

MEAN WEIGHT, MEAN LINEAR WEIGHT, DENIER AND METRIC COUNT OF FIBERS FROM ONE BATCH: APPLICATION TO WOOL. F. Monfort. Ann. Sci. Textiles Belges No. 2: 37-47 (June 1958). In French. Through BCIRA 38: 708 (1958). (526)

Some gravimetric parameters of systems of parallel fibers (slivers, rovings, yarns) are examined, the importance of sampling is pointed out and the problems in using the Palmer symbols for expressing gravimetric means are outlined.

DETERMINATION OF THE THEORETICAL BREAKAGE FREQUENCY OF WARP YARNS. P. Dubach. Textil-Praxis 13, No. 9: 899-902 (1958). In German. Through BCIRA 38: 709 (1958). (527)

The method, described for determining the theoretical warp-breakage frequency from load-elongation diagrams at repeated load changes and tensile-strength values plotted in a probability chart, can be used to investigate the effect of changes in loom speed and in air humidity in the weaving shed.

PERIODIC IRREGULARITIES IN SPINNING. A. Barella. Industrie Textile: 429-434 (June 1958). In French. Through BCIRA 38: 708 (1958). (528)

Although the study of variance-length curves is useful in detecting short- or long-period irregularities in yarns, plotting is very laborious even when using the most modern processes such as the inert test. Other means for representing and analyzing periodic irregularities are, therefore, reviewed and compared (harmonic analysis, correlograms, spectrograms) to show the advantages and applicability of spectral analysis in determining the origin of the irregularities found.

USING MILL TEST DATA TO SHOW YARN IRREGULARITY. E. R. Beckner. Textile World 108: 64-65, 136-140 (Dec. 1958). (529)

Techniques of finding standard deviation and standard error are described. The uses of the standard error are discussed.

ASSESSMENT OF YARN QUALITY. PART 1. USE OF YARN BLACKBOARDS. A. Langhorn and W. S. Sondhelm. J. Textile Inst. 49: P617-P633 (Nov. 1958). (530)

The wrapping of yarns on blackboards has, for many years, been in common use for yarn quality assessment, but so far no critical examination of the reproducibility of the results obtained by this method has been published. Investigations were therefore made to determine whether different observers graded sets of blackboards in the same order of merit when asked to judge them for nep, for evenness, and for general appearance. The tests were also designed to show whether two blackboa ds wrapped from the same yarn would be assessed as of equal merit or would be graded differently, and whether the judgments of expert observers were more reproducible than the judgments of observers inexperienced in this method of assessment. The outstanding result obtained from the experiments was that the assessment of yarn quality by blackboard wrappings suffers from the subjective nature of the test. Tables.

ASSESSMENT OF YARN QUALITY. PART 2. COMPARISON OF THE YARN IRREGULARITY ASSESSMENTS OBTAINED BY EXAMINATION OF WRAPPED BLACKBOARDS AND THOSE OBTAINED BY ELECTRONIC EVENNESS TESTS. A. Langhorn and W. S. Sondhelm. J. Textile Inst. 49: P634-P637 (Nov. 1958). (531)

Uster tests made on short lengths of yarns removed from the blackboards virtually confirmed the order of the average evenness rankings obtained by visual assessment of the blackboards. Evidence was also provided of the wide variations in evenness between the individual exposed threads which had comprised the visible part of the blackboards; these variations may have been, at least partly, responsible for the disagreements between the assessors on the relative merits of the blackboards. (See Part 1.) The tests made on additional samples taken from the same batches of yarns failed, in general, to confirm the order of ranking previously obtained, thus reaffirming that a single yarn blackboard is an inadequate sample. Tables.

DETECTION OF YARN IRREGULARITIES. J. Thavel. Industrie Textile: 515-518 (July 1958). In French. Through BCIRA 38: 708 (1958). (532)

The apparatus described comprises a photoelectric cell, a light source emitting a light beam on to the cell, a device guiding the moving thread through the light beam, and a gas-filled cold-cathode tiode valve into the circuit of which is inserted the photoelectric cell. The variations in yarn diameter modify the light intensity falling on to the cell and, consequently, change the potential of the electrode so as to trigger the valve; an indicating device, inserted into the circuit of the valve anode, operates when the valve is triggered, detecting any variations in the thickness of the yarn.

METRIC COUNT AND TEX SYSTEM IN THE COTTON INDUSTRY. F. Walz. Textil-Praxis 13, No. 9: 886-889 (1958). In German. Through BCIRA 38: 708 (1958). (533)

Examples are given to show that the introduction of the tex system requires a certain readjustment in calculations. The tex value should be the basic count description, the metric numbers being added in brackets.

Fabrics E3

DETERMINATION OF COMPARATIVE COLD PROTECTIVE PROPERTIES: SLEEPING BAGS AND SOME INSULATING GARMENTS. J. Kiger. Industrie Textile: 533-537 (July 1958). In French. Through BCIRA 38: 710 (1958). (534)

A method and apparatus are described for measuring the loss of heat in sleeping bags and clothing. The experiments are described and results are tabulated. See also abstr. 176/58.

AIR PERMEAMETER FOR FABRICS. S. L. Anderson and D. Clegg. (Letter to the editor). J. Textile Inst. 49: T629-T630 (Nov. 1958). (535)

A description of a new apparatus which will cover the range 0.7 to 1650 cc/sec per cm water pressure is given. Diagr.

APPLICATION OF MULTIPLE FACTOR ANALYSIS TO THE ASSESSMENT OF FABRIC HANDLE. W. S. Howorth and P. H. Oliver (Courtaulds Ltd). J. Textile Inst. 49: T540-T553 (Nov. 1958). (536)

The technique of multiple factor analysis has been used to study the factors that affect the "handle" of suiting materials. Unskilled observers describe the feel of these fabrics mostly in terms of smoothness, softness, coarseness, thickness, weight, warmth, and stiffness. The relationship between these qualities and objective measurements of stiffness, weight, thickness, hardness, and cover factor has been examined. A three-dimensional model can be used to display the relationship between the tests, which implies that there exist three physical tests that will give a description of the handling quality of a fabric. These can be identified tentatively as smoothness, stiffness, and thickness. Satisfactory measurements of stiffness and thickness can be made, but no measurement of smoothness has yet been found which correlates well with the subjective impression of smoothness. Tables, graphs, diagr, 17 refs.

METHODS OF TESTING TEXTILES. METHODS 11.1 AND 11.2: MEASUREMENT OF BURSTING STRENGTH. Can. Textile J. 76: 63-64 (Jan. 9, 1959). (537)

The diaphragm pressure test and the ball burst test for measuring bursting strength of fabrics are described.

DETECTION OF ANTIBACTERIAL PROPERTY OF FABRICS, AGAR PLATE METHOD: TENTATIVE TEST METHOD 90-1958. AATCC Comm. on Antibacterial Agents. Am. Dyestuff Reptr. 48: P8-P9 (Jan. 12, 1959). (538)

OPTICAL MEASUREMENTS ON TEXTILES. PART 2. H. Köb. Textil-Praxis 13, No. 9: 932-936 (1958). In German. Through BCIRA 38: 710 (1958). (539)

The new method described for determining the bleaching index (patent applied for) makes it possible to evaluate the bleaching result by means of the apparatus (developed by the author) in a dark room, to determine the difference in the reflectance of various materials, and to control dye application on damp cloth. For part 1 see abstr. 2148/58.

DAMAGE CAUSED BY RETAINED CHLORINE: TENTATIVE TEST METHOD 92-1958. AATCC Comm. on Damage Caused by Retained Chlorine. Am. Dyestuff Reptr. 48: P5-P7 (Jan. 12, 1959). (540)

A new tentative test method for determining damage caused by retained chlorine and replacing Tentative Test Method 69-52. More reproducible results should be obtained through the use of this new method.

CAUSES OF DEFECTS AND COMPLAINTS IN THE CASE OF COTTON AND CHEMICAL FIBER FABRICS. H. Kullrich. Z. ges. Textil-Ind. 60, No. 15: 684-688 (1958). In German. Through BCIRA 38: 682 (1958). (541)

Spinning, weaving, and finishing defects are shown and their causes are discussed.

PROBLEM OF LIGHTFASTNESS EVALUATION OF DYEINGS. P. Rochas and S. Pierret. Teintex 23, No. 8: 541-551 (1958). In French. Through BCIRA 38: 682 (1958). (542)

In this review, the authors discuss general methods for determining the fastness properties of dyeings, and lightfastness evaluation of dyeings by photometric measurements or comparison with standard dyeings. Three suggestions are made: selection of photocolorimeters or spectrophotometers permitting examination of small dyed surfaces; choice of simple but scientifically valid methods for evaluating the degradation of dyeings from photometric data; development and selection of test lamps giving a standard light corresponding, as accurately as possible, to one of the types defined by the CIE.

Other E4

DETERMINATION OF THE MEAN DEGREE OF POLYMERIZATION (DP) IN NATURAL AND REGENERATED CELLULOSES. O. Deschler. Textil-Praxis 13, No. 8: 834-839; No. 9: 927-932 (1958). In German. Through BCIRA 38: 711 (1958). (543)

It is shown that, of the mechanical, chemical and physical methods for determining the mean degree of polymerization, the viscosity measurement is, owing to its accuracy and sensitivity, the most suitable testing method for use in controlling finishing processes. Viscometric methods are reviewed, the DP determination in cupriethylenediamine (Cuen) being preferred to the classical Cuoxam method and to the nitrate process. Detailed directions are given for carrying out the method and calculating the results.

DETERMINING CONVENTIONAL FINISHES IN HAT FELTS. R. Aenishänslin (Ciba Ltd). Ciba Rev. 11: 28-29 (Nov. 1958). (544)

Methods for determining shellac and polyvinyl acetate finishes and for detecting water-repellent impregnations are described.

IDENTIFICATION OF DYESTUFF CLASSES. PART 2. ANIMAL FIBERS: WOOL AND SILK. PART 3. ACETATE FIBERS: ACETATE AND ARNEL. D. A. Shiraef (Gen. Aniline & Film Corp.). Fibres 20: 18-19 (Jan. 1959). (545)

PAPER CHROMATOGRAPHY OF DISPERSE DYES. C. D. Johnson and L. A. Telesz (Coll. of Technol. & Commerce, Leicester). (Letter to the editor). J. Soc. Dyers Colourists 74: 858-859 (Dec. 1958). (546)

PAPER ELECTROPHORESIS OF LEUCO SULFUR DYES. H. Tajiri (Osaka Customs Lab.). (Letter to the editor). J. Soc. Dyers Colourists 74: 860-862 (Dec. 1958). (547)

ELECTROMETRIC DETERMINATION OF THE rH VALUE. G. Meyer. SVF Fachorgan Textilveredlung 13, No. 8: 492-494 (1958). In German. Through BCIRA 38: 675 (1958). (548)

Measurement of the oxidation-reduction activity of aqueous solutions is briefly discussed to show that the modern acidometers (pH-meters) can also be advantageously used in measuring any electrochemical values associated with a difference of potential between two measuring electrodes.

RESIN-GLASS BOND CHARACTERISTICS. F. J. McGarry. ASTM Bull. No. 235: 63-68 (Jan. 1959). (549)

Three methods were developed to measure the mechanical strength of the joint between cast resins and single glass elements. One of these utilizes electrical grade glass rods of 0.010 in. diam. The methods give consistent results and indicate that various chemical finishes on the glass surface have no significant effect on the bond strength. Diagrs, graphs, 4 refs.

MILL MANAGEMENT F

MANAGEMENT PROBLEMS IN THE WOOL TEXTILE INDUSTRY. PART 1. GENERAL SURVEY. G. Wood and W. R. Seddon (Urwick, Orr & Partners Ltd). Fibres 20: 25-28, 38 (Jan. 1959). (550)

This is the first of a series of seven articles on management practices in the British wool textile industry.

COMPUTER CONTROL IN KNITTING. Job White & Sons Ltd. Textile Weekly 59(1): 22-24 (Jan. 2, 1959). Man-Made Textiles 34: 44-45, 63 (Dec. 1958). (551)

The use of the DEUCE electronic computer for production control in a knitting mill is described.

WASTE FACTORS. M. Havinoviski. Textile Inds. 123: 79-81 (Jan. 1959). (552)

A system of standardizing and tabulating waste by process and yarn count is described. A sample tabulation is given. The values can be used for better cost control.

Industrial engineering F1

SAVE $$$ WITH STATISTICS. F. Vogel. Textile Inds. 122: 98-100 (Dec. 1958). (553)

Examples are given of how supervisors can apply statistical quality control methods in the mill to save money.

STARTING A QUALITY CONTROL PROGRAM. N. L. Enrick (Inst. of Textile Technol.). Textile Inds. 123: 70-72 (Jan. 1959). (554)

A consideration of technological and statistical aspects of modern quality control, as related to the various systems of yarn manufacture (cotton, woolen, worsted, and filament), and involving design, workmanship, and uniformity. Major phases of control discussed are raw stock, machinery speeds, machine settings, sizing, evenness, runout, packages, ends-down, production, and waste.

QUALITY CONTROL AND INDUSTRIAL STATISTICS. 2d ed. A. J. Duncan. Richard D. Irwin, Inc., Homewood, Ill. 1959. 946 p. $9.00. (555)

The expanded second edition includes enlarged sections on sampling, analysis of variance, and experimental design. A new chapter on "Mapping response surfaces and determination of optimum conditions" presents a simplified set of procedures for use of this relatively new and popular technique of obtaining an optimum combination of variables for accomplishing a desired end-product, such as highest quality, greatest yield, or minimum waste.

MUTUAL INTERFERENCE OF MACHINES. A. Valota. Industrie Textile: 519-523 (July 1958). In French. Through BCIRA 38: 719 (1958). (556)

Reference is made to the Dale Jones interference computer, by means of which it is possible to calculate the total work effected by n machines, the total work that could be effected theoretically and the loss due to machine interference i. Comparison of the results obtained with this apparatus and those calculated by means of the equations given have confirmed the validity of the author's tables. Factors affecting the interference are discussed.

SCIENCES G

Chemistry G1

ESTIMATION OF CARBOXYLIC ACID GROUPS IN CELLULOSIC MATERIALS. W. B. Achwal, G. M. Nabar, and C. V. Padmanabhan (Univ. of Bombay). J. Sci. Ind. Research (India) 17: 497-499 (Dec. 1958). (557)

A modified iodometric method for the estimation of carboxyl groups in cellulosic materials is described. The method consists in treating the cellulosic material at 60° C with a mixture of sodium chloride, potassium iodate, potassium iodide, and sodium thiosulfate for 1 hr, and estimating the excess thiosulfate by titration with iodine.

POLYURETHANES. B. A. Dombrow (Nopco Chem. Co.). Reinhold Pub. Co., N.Y. 1957. 176 p. $4.50. (558)

The chemistry and applications of the polyurethanes are discussed under the headings: introduction, chemistry, rigid foams, semi-rigid foams, flexible foams, rubbers, adhesives, coatings, textile applications, miscellaneous, and handling of diisocyanates. Bibliography.

DEGREE OF POLYMERIZATION AND ITS DISTRIBUTION IN CELLULOSE RAYONS. PART 7. THE INTRINSIC VISCOSITY AND DEGREE OF POLYMERIZATION OF SECONDARY CELLULOSE ACETATE FRACTIONS. R. J. E. Cumberbirch and W. G. Harland (Shirley Inst.). J. Textile Inst. 49: T664-T678 (Dec. 1958). (559)

The fractionation of two secondary cellulose acetates, in three stages and on a scale large enough to permit model filaments to be spun from the fractions, is described. The degrees of polymerization of all the fractions were derived from osmotic measurements in ethyl lactate, and of some of the fractions from measurements in acetone, in 80/20 v/v acetone/water, in pyridine at 25° and 60° C, and in 70/30 methylene chloride/ethanol. The relations between degree of polymerization and intrinsic viscosity measured in acetone and in 80/20 acetone/water have been established for the range 100-1200 polymer units and 0.8-6.0 dl/g. Diagr, graphs, tables, 24 refs.

RELATION BETWEEN INTRINSIC VISCOSITY AND DEGREE OF POLYMERIZATION FOR CELLULOSE AND ITS PRINCIPAL DERIVATIVES. R. J. E. Cumberbirch and W. G. Harland (Shirley Inst.). J. Textile Inst. 49: T679-T686 (Dec. 1958). (560)

The relation between intrinsic viscosity and degree of polymerization has been established for cellulose in cuprammonium, and cellulose triacetate in methylene chloride/ethanol mixture. The relation for cellulose was derived by two independent routes and good agreement obtained. Tables are given in an appendix whereby degrees of polymerization can be determined directly from cuprammonium fluidity measurements made at cellulose concentrations of 2 g/100 ml and 0.5 g/100 ml. Graphs, tables, 11 refs.

REVIEW OF THE LITERATURE RELATING TO THE INTERACTION OF CELLULOSE AND FORMALDEHYDE. W. J. Roff (Shirley Inst.). J. Textile Inst. 49: T646-T663 (Dec. 1958). (561)

The subject is introduced by a short note on the reactivity of formaldehyde, particularly with reference to the industrial treatment of cellulose with formaldehyde or its derivatives, and this is followed by a survey of the relevant literature dating from 1904 to 1956. The survey is arranged under the following main headings: (1) interaction under substantially nonaqueous conditions, (2) under wholly aqueous conditions, and (3) under aqueous conditions followed by drying and baking, the last section representing most of the commercial processes. The information assembled in the survey is then summarized and discussed in relation to theoretical and practical aspects of (a) the reaction and (b) the products, and some observations are contributed on the question of cross-linkage and cyclic (internal) linkage. 74 refs.

ABILITY OF THE SODIUM SALT OF CARBOXYMETHYLCELLULOSE (NaCMC) TO REMOVE AND PREVENT REDEPOSITION OF DIRT AND THE HARDNESS OF WATER. K. J. Nieuwenhuis and K. H. Tan. Teintex 23, No. 9: 629-648 (1958). In French. Through BCIRA 38: 711 (1958). (562)

Literature concerning the effect of NaCMC on the dirt removing power of detergents and its ability to prevent redeposition is reviewed, and washing tests carried out on a laboratory scale are reported; some of the results are compared with practical washing tests. 25 refs.

PREPARATIONS AND PROPERTIES OF CASTOR OIL URETHANE FOAMS. D. A. Yeadon, W. F. McSherry, and L. A. Goldblatt (So. Reg. Research Lab.). J. Am. Oil Chemists Soc. 36: 16-20 (Jan. 1959). (563)

The preparations and properties of urethane foams made from tolylene diisocyanate and 50, 60, 70, and 80% castor oil were investigated. Photo, graphs, tables, 8 refs.

ABSORPTION OF COPPER BY COTTON CELLULOSE FROM SODIUM CUPRATE SOLUTIONS: THE NORMANN COMPOUND. G. F. Davidson and H. Spedding (Shirley Inst.). J. Textile Inst. 49: T621-T626 (Nov. 1958). (564)

The absorption of copper by cotton cellulose from sodium cuprate solutions increases continuously with increasing concentration of copper in the equilibrium solution, and reaches values considerably greater than that which corresponds to the formation of the compound postulated by Normann. Graph, tables, 11 refs.

INVESTIGATIONS INTO THE ADSORPTION OF WATER-SOLUBLE ORGANIC COMPOUNDS ON COTTON. PART 1. ADSORPTION OF AMINO- OR HYDROXYL-SUBSTITUTED AROMATIC COMPOUNDS. D. Lamparsky and E. Rack. Kolloid Z. 160, No. 1: 7-16 (1958). In German. Through BCIRA 38: 740 (1958). (565)

Experiments are discussed, which were carried out to ascertain the effect of molecular structure of aromatic compounds (with one and several phenyl nuclei) and, in particular, of substances with either a hydroxyl or amino group in the same position, on their sorption properties on cotton (Egyptian). These experiments and their results are of particular interest in view of the lack of literature data on the sorption of optical brightening agents in the presence of detergent-active compounds.

ATMOSPHERIC POLLUTION AND THE SOILING OF YARNS AND FABRICS. W. H. Rees (Shirley Inst.). Textile Merc. 139: 848-851, 853-854 (Dec. 12, 1958). (566)

Following a description of the factors which influence soiling of textiles by airborne dirt, an account is given of soiling by exposure to moving air, by thermal precipitation, and by electrostatic attraction of airborne particles, and of the effect of fabric wettability on the appearance of a cotton fabric exposed to a damp, polluted atmosphere. The "murk" unit of air dirtiness and the measurement of murk values, with particular reference to the use of the Shirley portable air dirtiness sampler, are described. Photos, photomicrograph, graph.

LIGHT TENDERING OF DISACCHARIDES IN THE PRESENCE OF TiO_2 PIGMENT. J. Schurz and E. Kienzl. Svensk Papperstidn. 61, No. 19: 844-850 (1958). In German. Through BCIRA 38: 747 (1958). (567)

Irradiation of disaccharides with ultraviolet light and the examination of its results was undertaken to obtain information on the problem of light tendering of cellulose by indirect photolysis or photooxidation. The results indicate that the light causes, in the presence of titanium dioxide, oxidative changes in the molecule without its degradation, the latter setting in in a second reaction. Mechanisms for this reaction are proposed.

DEPOSITION OF SOILING MATTER FROM SOME DETERGENT SYSTEMS. PART 3. NONAQUEOUS SYSTEMS (continued). R. E. Wagg (Brit. Launderers' Research Assoc.). J. Textile Inst. 49: T561-T565 (Nov. 1958). (568)

A further range of substances has been examined for effectiveness in reducing the deposition of soiling matter on to woolen cloth agitated in trichlorethylene and in white spirit. It has been found possible to draw some tentative conclusions as to the types of compounds which reduce deposition. Under appropriate conditions, long-chain fatty acid salts, certain surface-active agents, some oil and petroleum additives, and an aromatic amine were effective. In contrast, fatty acids had little effect under the conditions examined. Aliphatic amines and some surface-active compounds did not reduce deposition, some even causing a marked increase. The action of two additives was investigated in detail, and the moisture content of the wool was shown to be important. Tables, graphs, 9 refs.

SYNDETS AND SOAPS: I/EC ANNUAL REVIEW 1958. F. D. Snell. Ind. Eng. Chem. 51: 42A-46A (Jan. 1959). (569)

New developments during 1958 in synthetic detergents and soaps are reviewed.

SOLUBLC WOOL PROTEINS. PART 1. LIGHT SCATTERING AND VISCOSITY IN AQUEOUS SOLUTIONS. PART 2. LIGHT SCATTERING AND VISCOSITY IN FORMIC ACID AND DICHLOROACETIC ACID SOLUTIONS. B. S. Harrap and E. F. Woods (Wool Textile Research Labs., CSIRO). Australian J. Chemistry 2: 581-606 (Nov. 1958). (570)

S-carboxymethylkerateine 2 and alpha-keratose were investigated. Graphs, tables, 49 refs.

DEGRADATION OF CELLULOSE IN AIR AT 250° C AS SHOWN BY INFRARED SPECTROSCOPIC EXAMINATION. H. G. Higgins. J. Polymer Sci. 28: 645-648 (Apr. 1958). Through BCIRA 38: 744 (1958). (571)

Purified alpha-cellulose pulp was heated in air at 250° C for various periods of time and at each stage (0-48 hr) infrared spectra were studied using the potassium chloride disc method of specimen preparation. The oxidative nature of the initial stages of thermal degradation of cellulose in air is indicated mainly by the development of C = O groups. The reaction quickly penetrates the crystalline regions as shown by complete destruction of the carbohydrate spectrum. A relatively stable structure in which carboxyl groups have largely replaced aldehyde groups appears to develop after about 12 hr. The evidence is consistent with the development of nonaromatic, but somewhat unsaturated, cyclic structures.

TREATMENT OF WOOL CLOTH WITH CONCENTRATED SULFURIC ACID. J. W. Bell and C. S. Whewell (Leeds Univ.). (Letter to the editor). J. Textile Inst. 49: T706 (Dec. 1958). (572)

Although concentrated sulfuric acid is a potent degrading agent for wool, if the time of reaction is limited to about 20 sec, the amount of degradation can be controlled. Fabric so treated resisted dyeing with Solway Blue B and showed an unusual nonshrink effect.

FUNDAMENTALS OF PAPERMAKING FIBERS. F. Bolam, ed. Technical Sect. of the Brit. Paper and Board Makers' Assoc., St. Winifred's, Welcomes Road, Kenley, Surrey, England. 1958. 487 p. $10.50. (573)

The papers from the Symposium on Fundamental Aspects of Fibres and their Treatment for Papermaking, held at Cambridge in Sept. 1957, are arranged under the broad headings: (1) the morphology of pulp fibers, (2) the chemistry of pulp fibers, (3) properties of bonded fiber assemblages, and (4) the process of beating.

MOISTURE RELATIONS OF CELLULOSE. PART 4. EFFECT OF STABILIZATION OF COTTON CELLULOSE ON ITS SORPTIVITY AT DIFFERENT TEMPERATURES, AND ITS BEARING ON ISOSTERIC HEATS OF SORPTION. M. Wahba, S. Nashed, and K. Aziz (Univ. of Cairo). J. Textile Inst. 49: T519-T531 (Nov. 1958). (574)

The sorbing capacity of cellulose can be made reproducible by a method of stabilization consisting of several repetitions of a cyclic process involving saturation of the cellulose with water vapor followed by drying. The effect of this stabilization on the sorption isotherms has been studied, particularly in regard to the isosteric evaluation of differential heats of sorption. The mechanism of stabilization is discussed in terms of the physical structure of cellulose, and the variation with temperature of the binding energy of the chain molecules in the noncrystalline region of cellulose is invoked to explain the anomalies in the values of the differential heats of sorption obtained by different workers. Further evidence is also provided in favor of the concept of an "optimum" temperature, above which the adsorption isotherms become closer together; this is lowered by stabilization. Graphs, 14 refs.

Physics G2

RELATION OF CHARGE TO FRICTIONAL WORK IN THE STATIC ELECTRIFICATION OF FILAMENTS. J. B. Levy, J. H. Wakelin, W. J. Kauzmann, and J. H. Dillon (Textile Research Inst.). Textile Research J. 28: 897-911 (Nov. 1958). (575)

A study of the generation of electrical charge on fibrous materials was carried out using the apparatus of Hersh and Montgomery, in which a fiber is held fixed in an insulated lower yoke while a second fiber in a grounded upper yoke is rubbed across it under controlled ambient and mechanical conditions. The original apparatus was modified to permit measurement of the frictional work of rubbing as well as the charge. It was possible to calculate the mechanical energy expended in any one rub and to estimate the resulting electrical energy. The presence of a lubricant on the fiber surfaces during rubbing was found in most cases to cause a decrease in both the charge and frictional work of rubbing. Diagrs, graphs, tables, photomicrographs, 79 refs.

MISCELLANY H

INTERNATIONAL TEXTILE MACHINERY EXHIBITION. Modern Textiles Mag. 39: 52-56 (Dec. 1958). Am. Textile Reptr. 72: 17, 32-34, 40-42 (Dec. 11, 1958). Textile Merc. 139: 664-671 (Nov. 7, 1958). Textile Inds. 122: 88-91 (Dec. 1958). Fibres 19: 343-348, 369 (Nov./Dec. 1958). (576)

INTERNATIONAL TEXTILE MACHINERY EXHIBITION, MANCHESTER. J. Textile Inst. 49: P648-P656 (Nov. 1958). (577)

Spinning and yarn preparation machinery, by H. Sneyd, p. P648-P651; Weaving machinery, by J. J. Vincent, p. P651-P653; Dyeing and finishing, by F. W. Thomas, p. P653-P656.

TEXTILE RECORDER ANNUAL 1958/59: BOOK OF THE YEAR. Harlequin Press Ltd, Manchester, England, 1959. 172 p. (578)

This review of 1957 in the British textile industry includes surveys of trade and industry, as well as a series of articles on technical progress in the mills, new machines and equipment, raw materials position, and statistics on imports and exports.

BRITISH TEXTILE MACHINERY DEVELOPMENTS IN 1958. Textile Weekly 58(2): 1751-1752, 1755-1756 (Dec. 19, 1958). (579)

PLASTICS: I/EC ANNUAL REVIEW 1958. E. L. Kropa and E. E. McSweeney (Battelle Memorial Inst.). Ind. Eng. Chem. 51: 36A-39A (Jan. 1959). (580)

New developments during 1958 in plastics are reviewed.

PLASTICS: THE YEAR 1958 IN REVIEW. Modern Plastics 36: 135-144, 181-199 (Jan. 1959). (581)

Review with 823 references.

EDUCATION IN A CHANGING SOCIETY. G. S. J. White (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 74: 733-738 (Nov. 1958). (582)

The Society of Dyers and Colourists' interest and involvement in education is discussed. Some recent comparisons of educational processes, particularly in science and technology, in the USSR, UK, and USA are made. Tables, 8 refs.

TEXTILE EDUCATION'S PROBLEMS. Modern Textiles Mag. 40: 33-37 (Jan. 1959). (583)

How industry can help, by B. W. Hayward, p. 33-34; More science and engineering needed, by M. J. Lydon, p. 34-35, 37; Scholarships, publicity will help, by M. E. Campbell, p. 36-37.

TEXTILES: I/EC ANNUAL REVIEW 1958. A. E. Brown and J. F. Krasny (Harris Research Labs.). Ind. Eng. Chem. 51: 57A, 59A (Jan. 1959). (584)

New developments during 1958 in fibers, dyes, and finishes.

REVIEW OF TEXTILE PROGRESS. v. 9, 1957. Textile Inst., 10 Blackfriars St., Manchester 3, England. 1958. 545 p. $6.00. (585)

Comprehensive review of advances during 1957 in physics and chemistry of fibers, fiber production, yarn processing, fabric production, dyeing, finishing, testing, laundering and drycleaning, building and engineering, and electronics and automation. Extensive literature references.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington, 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Natural fibers A1

COTTON SAMPLE CUTTER. M. C. Syers, Sr. USP 2 866 504, Dec. 30, 1958. (586)

Apparatus for cutting uniform samples from opposite sides of cotton bales at selected positions.

Manmade fibers A2

HIGH STRENGTH VISCOSE RAYON FILAMENTS. N. L. Cox (to E.I. du Pont de Nemours & Co.). USP 2 860 480, Nov. 18, 1958. (587)

High strength filaments with a cross-section composed of 75% skin and 25% core.

POROUS COMPOSITE FILAMENTS. A. L. Breen (to E.I. du Pont de Nemours & Co.). USP 2 861 319, Nov. 25, 1958. (588)

Smooth surfaced, low density filaments with air spaces resistant to crushing and to liquid entrance are composed of a solid sheath of a synthetic polymer surrounding a core which differs from the sheath material and has intermittent voids along its length.

WOOL-LIKE COPOLYMER FIBERS. N. A. Matlin (to Rohm & Haas Co.). USP 2 866 256, Dec. 30, 1958. (589)

The fibers claimed have a multiplicity of adjoining small scale-like sections, extending along the length of the fibers, the outer surfaces of which are tapered in one direction between their junctions.

YARN PRODUCTION B

PACKAGING CONTINUOUS GLASS FIBER STRANDS. W. W. Drummond and W. R. Steitz (to Owens-Corning Fiberglas Corp.). USP 2 863 208, Dec. 9, 1958. (590)

Packaging is performed simultaneously with continuous strand formation.

FALSE TWIST CRIMPING APPARATUS. L. Ubbelohde (Germany). USP 2 863 280, Dec. 9, 1958. (591)

A continuous filamentary bundle is passed through a false twisting zone after it has been previously softened, plasticized, and resolidified.

APPARATUS FOR THERMALLY PROCESSING THERMOPLASTIC YARNS. W. A. Seem, N. J. Stoddard, K. H. Gibson, H. B. Miller, and R. G. Hilbert (to Universal Winding Co.). USP 2 864 229, Dec. 16, 1958. (592)

Apparatus for subjecting yarn to controlled degrees of tensile stress, with or without heat, and for imparting a twist to the yarn following the processing. This process provides uniformity of yarn characteristics to yarn which has become nonuniform during heat treatments in package form. It is particularly applicable to the reprocessing of torque stretch yarns and other textured yarns.

HEATING DEVICE FOR USE IN PROCESSING THERMOPLASTIC YARNS. N. J. Stoddard and W. A. Seem (to Universal Winding Co.). USP 2 864 931, Dec. 16, 1958. (593)

An electric heating device consists of a thin-walled tube through which the yarn continually passes during processing (i.e. uptwisting). This heating gives the yarn more uniform physical characteristics.

STUFFER CRIMPER. R. A. A. Hentschel (to E.I. du Pont de Nemours & Co.). USP 2 865 080, Dec. 23, 1958. (594)

Stuffer crimper with means for relaxing (with steam) the crimped filaments so that they have more uniform dye affinity and physical properties.

MODIFIED MINERAL OIL COMPOSITION AS LUBRICANT FOR CELLULOSE ACETATE FIBER, YARN, OR FABRIC. C. F. Chandler (to E.I. du Pont de Nemours & Co.). USP 2 865 855, Dec. 23, 1958. (595)

SLIVER COILER MECHANISM. P. B. West and G. C. Anderson (to Saco-Lowell Shops). USP 2 866 232, Dec. 30, 1958. (596)

Mechanism which stops the operation of the coiler when the tube through which the sliver is delivered becomes clogged.

HIGH SPEED FALSE TWIST CRIMPING MACHINERY. H. A. Schrenk (to Am. Enka Corp.). USP 2 866 311, Dec. 30, 1958. (597)

Opening, picking, fiber preparation B1

BLENDING SLIVERS. Neder. Org. Voor Toegepast-natuurwetenschappelijk. BP 802 451, Oct. 8, 1958. Through BCIRA 38: 726 (1958). (598)

In blending different fibers in sliver form, at least one sliver is predrafted by rollers placed behind the back rollers of the blending machine so as to bring it (them) to the desired weight per unit length before mixing and drafting with the other slivers.

Carding and combing B2

CLEANING APPARATUS FOR CARDING MACHINES. Manufaktur I. Malmo AB. BP 803 116, Oct. 15, 1958. Through BCIRA 38: 726 (1958). (599)

A portable device for stripping the clothed drums of a carding engine comprises a toothed cylinder rotating in a housing that also contains a compressed-air turbine. The housing has a lengthwise slot through which an arc of the cylinder can make contact with the card clothing. Adjustable sliders on each side of the slot serve to support the apparatus on the drum to be stripped.

DRIVE FOR COMBING MACHINE NIPPERS. F. Schumann (to Deutscher Spinnereimaschinenbau). USP 2 865 055, Dec. 23, 1958. (600)

Drive for opening and closing the nippers in synchronization with the rotating comb segment in machines having stationary nippers and a rotatable combing roller.

Drawing and roving B3

TOP DRAFTING ROLL SUPPORTING AND WEIGHTING. F. Kübler (to SKF Kugellagerfabriken GmbH). USP 2 865 056, Dec. 23, 1958. (601)

In a lever for releasably holding the pivoted arm supporting the top rolls, the lever, the catch on the lever, and the fixed stop which is engaged by the catch to hold the arm in its operative position are arranged so that the reaction of the fixed stop against the catch, resulting from the weighting spring forces, cannot inadvertently disengage the catch from the stop.

Spinning, winding, twisting B4

FLYERS FOR SPINNING MACHINES. G. Meyer-Busche (Germany). BP 801 863, Sept. 24, 1958. Through BCIRA 38: 667 (1958). (602)

The flyer has a rotationally balanced bell-shaped dome or hood provided with a groove for inserting the thread, a lateral thread-guiding channel, and a presser finger spring-urged against the bobbin winding and capable of being locked in its outer position.

FALSE TWISTING DEVICE AND METHOD. NV Onderzoekingsinst. Research. BP 802 089, Oct. 1, 1958. Through BCIRA 38: 698 (1958). (603)

The device consists essentially of two rotors separated by a narrower cylindrical portion, all freely rotatable about a common axis. The yarn is fed through a tube to the first, pulley-driven rotor from which it emerges by way of a guide channel ending near the circumference of the rotor. It is then wrapped twice around the intermediate cylinder and passed into a guide channel in the second, conical rotor, entering near the circumference and leaving at the axis.

YARN TRAVERSING MECHANISM FOR PACKAGES HAVING FRUSTOCONICAL ENDS. J. Condamin et Prodon SA. BP 802 446, Oct. 8, 1958. Through BCIRA 38: 726 (1958). (604)

The invention relates to traversing mechanism, particularly for throwing machines, of the type in which the thread guide is in constant contact with the package and occurs at the end of a pivoted and oscillating rod mounted on a reciprocating support. The bar is slidably carried in a hole in a ball and socket mechanism.

DIRECT DRIVE SPINDLE SPINNING MACHINES. W. Leutert (to Soc. Brematex). USP 2 861 436, Nov. 25, 1958. (605)

Device for coupling together adjacent shaft sections.

THREAD BREAKAGE INDICATOR AND STOP MOTION FOR SPINNING MACHINES. E. Breuning (to Pneumafil Corp.). USP 2 863 276, Dec. 9, 1958. (606)

A thread sieve is pivotally mounted in the pipeline of a thread suction system, so that it partially closes the pipeline and is pivoted outward upon impact by a broken thread. This pivoting is utilized to actuate a mechanical and/or electrical relay which stops the machine.

YARN TWISTER. P. Boillat and R. Rohrer (to Heberlein Patent Corp.). USP 2 863 277, Dec. 9, 1958. (607)

Twisting device for operation at rotative speeds of 50,000 rpm to 200,000 rpm for false twisting yarns traveling at high linear speeds.

MOUNTING FOR BELT-DRIVEN SPINDLE. F. Scragg (to E. Scragg & Sons Ltd). USP 2 863 278, Dec. 9, 1958. (608)

Mounting for spindle bearings which reduces the vibration of an out of balance package to a minimum and permits the spindle to be run at a higher speed.

CONTINUOUS GLASS FILAMENT WINDING APPARATUS. R. J. Sherwin (to L. O. F. Glass Fibers Co.). USP 2 863 612, Dec. 9, 1958. (609)

MECHANICAL DAMPER FOR YARN TENSION REGULATOR. N. E. Klein (to Deering Milliken Research Corp.). USP 2 864 566, Dec. 16, 1958. (610)

TOP DRAFTING ROLL GUIDES. L. M. Cotchett and R. K. Butler (to Textile Eng. Corp.). USP 2 865 057, Dec. 23, 1958. (611)

The top rolls are mounted without the use of cap bars by the use of guides which support the top rolls in working relation with the bottom rolls through engagement with the necks between the bosses of the top rolls. The guides also apply the weighting force to the rolls.

TRAVERSING YARN BALLOON CONTROL. O. L. Hope (to Textile Machy. Exchange Inc.). USP 2 865 162, Dec. 23, 1958. (612)

A thin guard ring encircles each of the spindles of a twisting machine and moves with the ring rail to limit the extent of ballooning.

GILL-SPINNING FRAME FOR HARD FIBERS. J. P. Mackie (to James Mackie & Sons Ltd). USP 2 866 310, Dec. 30, 1958. (613)

Haul pulley assembly which eliminates the protrusion of loose fibers (which give a hairy appearance) from the yarn.

Yarns B5

CRIMPING FILAMENTS AND YARNS. J. P. Russell (to Brit. Nylon Spinners Ltd). BP 801 464, Sept. 17, 1958. Through BCIRA 38: 668 (1958). (614)

Thermoplastic monofils or filament yarns (especially of nylon) are passed through a heating zone, then over an endless, rotating band of rubber filled with carbon black whereby the filaments rotate, then through a cooling zone to set the twist, and finally to a winding device. The filaments are held against the convex surface of the friction band and the final winding proceeds under a lower tension than that at which they leave the band.

CONTINUOUS CRIMPING OF SYNTHETIC THERMOPLASTIC THREADS OR YARNS. NV Onderzoekingsinst. Research. BP 801 491, Sept. 17, 1958. Through BCIRA 38: 668 (1958). (615)

The false-twist device employed in this process comprises a pair of hyperbolic rollers that make contact as they rotate along a common line which is also the path of the thread as it travels from a supply device, between the rollers, and to a takeup device.

METHOD AND APPARATUS FOR YARNS WITH INCREASED TWIST LIVELINESS. NV Onderzoekingsinst. Research. BP 801 858, Sept. 24, 1958. Through BCIRA 38: 667 (1958). (616)

A twisted yarn is led via a twist stop and a heating zone to a false-twist device, then through a cooling zone, and, if desired, a sizing unit. The novelties claimed are (1) the use of a false-twist device for detwisting, and (2) the fact that sizing is not necessary for suppressing the liveliness if the yarn is stored under high tension.

PROCESS FOR THE TREATMENT OF RAYON TIRE CORD. Textile & Chemical Research Co. Ltd. BP 802 513, Oct. 8, 1958. Through BCIRA 38: 730 (1958). (617)

The invention relates to the treatment of rayon yarn for tires and belts, to reduce internal abrasion and increase adhesion to rubber. The cord is impregnated with a graphitic or siliceous lubricant and coated with a resorcinol/formaldehyde resin.

YARN COMPRISING CRIMPED FILAMENTS. D. C. Hookway (to Brit. Nylon Spinners Ltd). BP 802 689, Oct. 8, 1958. Through BCIRA 38: 727 (1958). (618)

The crimping process in which yarn of the nylon type is drawn over heated edges is applied to filaments containing air-filled spaces ("vacuolar" or "lacunose" filaments). Four examples are given in detail and results of skein tests are tabulated for seven others.

CORDS FOR TENNIS RACKETS AND MUSICAL INSTRUMENTS, ETC. J. T. Crandall (to Ashaway Line & Twine Mfg. Co.). USP 2 861 417, Nov. 25, 1958. (619)

High tensile strength cords composed of a filament core to which a spirally wound sheath is bonded.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

WINDING AND DELIVERY OF SPOOLS AND THE LIKE. J. D. W. Taylor (to Wm. Ayrton & Co. Ltd). BP 801 508, Sept. 17, 1958. Through BCIRA 38: 670 (1958). (620)

In an automatic spooling machine having a delivery chute for the wound "spools" (used generically for yarn packages such as bobbins) the stripping and guide devices are arranged in such a position relative to the ends of the spool that they hold it from falling until it is completely released from both winding centers. The spool is thus delivered to the chute in its true winding orientation.

YARN LENGTH METERING MECHANISM. Vereinigte Glanzstoff Fabriken AG. BP 801 600, Sept. 17, 1958. Through BCIRA 38: 670 (1958). (621)

Mechanism for the production of yarn packages with predetermined lengths of yarn comprises (1) a metering wheel turned by yarn passing over it, (2) a system of gear-wheel trains coupled to the metering wheel, and (3) contacts on the gear wheels that complete an electrical circuit for stopping the machine when the wheels return to their original relative positions.

APPARATUS FOR THE REMOVAL OF THE RESERVE THREAD REMAINDER FROM WEFT BOBBINS. K. Moos (Switzerland). USP 2 865 081, Dec. 23, 1958. (622)

The bobbins are first automatically conveyed to a stripping device which rotates the bobbin to partially unwind the thread and they are then passed through a stream of compressed air to remove the thread.

YARN WINDING. H. Halkyard (to Brit. Celanese Ltd). BP 802 075, Oct. 1, 1958. Through BCIRA 38: 701 (1958). (623)

The invention relates particularly to a tensioning device for a cone winder on which the yarn package is driven at constant angular speed. The yarn takes a zig-zag path through two intermeshing sets of horizontal bars in which the angular deflection of the yarn is limited by a maximum amount that is diminished as the package grows by moving both sets of bars so as to reduce the tension in the yarn.

DRIVING AND TENSION CONTROL ARRANGEMENTS IN YARN WINDING MACHINES. P. R. C. Grangie and L. E. Bianco (France). BP 802 182, Oct. 1, 1958. Through BCIRA 38: 701 (1958). (624)

The invention relates particularly to means for winding yarns, supplied directly from a twisting or cabling machine, on a machine of the Leesona type. All the bobbin-carrying spindles are driven in unison from a common shaft, and a nonvariable mechanical connection is provided between these spindles and the yarn guides. The drive is through a variable-speed gear responsive to any divergence of the sum of the yarn tensions from a predetermined value.

CROSS-WINDING MACHINE. G. Sahm. BP 802 430, Oct. 8, 1958. Through BCIRA 38: 730 (1958). (625)

The invention relates to a cross-winding machine in which the reciprocation of the thread guide is governed by the rotation of a cam drum. The drum has peripheral cam surfaces defining between them two channels of different widths, one above the other and extending the whole length of the cam surface. One channel accommodates a guide "shuttle" and the other a guide roller (or rollers). As the cam drum rotates the thread guide carriage moves axially through the guide means provided by the channels.

THREAD WINDING MECHANISM. Algemene Kunstzijde Unie NV. BP 802 449, Oct. 8, 1958. Through BCIRA 38: 730 (1958). (626)

The mechanism comprises a driving drum, a swingable forked member for applying a bobbin to the drum and maintaining it along a generator, and an abutment for limiting downward movement of the forked member. Two rollers are mounted on each arm of the fork for cooperation with the edges of the bobbin. Bobbin holders with central carrier spigots are dispensed with.

PORTABLE YARN END BONDING DEVICE. N. C. Chang and R. E. Langlois (to A. B. Carter Inc.). USP 2 863 492, Dec. 9, 1958. (627)

Device for mechanically effecting a union of two yarn ends by means of an adhesive.

WINDING MACHINE DUST AND FLUFF EXHAUSTING DEVICE. W. Schweiter and K. Marx (to Maschinenfabrik Schweiter AG). USP 2 863 611, Dec. 9, 1958. (628)

The supply cone and the tensioning mechanism are enclosed in a funnel that communicates with a suction conduit. The funnel is made in sections, one of which is hinged for access to the thread and the interior mechanism.

SIZING AND POLISHING OF SEWING THREADS. F. Osborne (to Wm. Ayrton & Co. Ltd). USP 2 863 787, Dec. 9, 1958. (629)

The running yarn is made to take at least one turn around the rotary brush that applies the size in a polygonal path (constrained by guides) in such a way that more than one span makes contact with the brush. Further, feed-back of tension due to contact with the brush is prevented and, if desired, compensation is made for stretch.

SPOOL SUPPORT FOR WINDING MACHINE. S. Furst (to Walter Reiners). USP 2 865 577, Dec. 23, 1958. (630)

Arrangement in which the axes of the spool support coincide with the axis of the spool so that wobbling is prevented.

APPARATUS FOR SIZING YARNS. G. L. Ball (to Batson-Cook Co.). USP 2 866 254, Dec. 30, 1958. (631)

The penetration of size into warp yarns passing through size box is improved by subjecting the yarns to a squeezing action while they are below the liquid level of the size solution.

WARPER BEAM SUPPORT. A. L. Ewing (to E.I. du Pont de Nemours & Co.). USP 2 866 607, Dec. 30, 1958. (632)

Improved support of warper beam heads which will prevent dishing of the heads in use.

Weaving C2

HEDDLE SHAFTS. Grob & Co. AG. BP 801 906, Sept. 24, 1958. Through BCIRA 38: 670 (1958). (633)

In a loom heddle shaft having detachable lateral supports bolted to carrier bars, each end of each carrier bar has a lengthwise, threaded bore for receiving the bolt and a transverse bore for an insert that prevents unintentional rotation of the bolt. A projecting rib on the lateral support also engages with the carrier bar to prevent relative movement of the bar and support.

JACQUARD CYLINDER DRIVE MOTIONS. M. Brown (to J. T. Hardaker Ltd). BP 802 027, Sept. 24, 1958. Through BCIRA 38: 670 (1958). (634)

The drive motion claimed includes (1) a pair of driven peg wheels mounted in axial alignment for driving in opposite directions, (2) a star wheel fitted with selector control means by which it can be moved so as to be driven by either of the peg wheels, and (3) means by which the star wheel can drive the jacquard cylinder.

PLASTIC PICKER FOR LOOMS. Pickerfabrik Westfalia GmbH. BP 802 932, Oct. 15, 1958. Through BCIRA 38: 730 (1958). (635)

The picker is molded from polythene, pressed from polythene powder, or machined from a slab or bar of polythene. Bronze powder may be introduced in the neighborhood of the picker spindle to enhance the heat conductivity.

POWER LOOM HAVING AUTOMATIC WARP LETOFF AND CLOTH TAKEUP MOTIONS. F. Kondo. BP 802 344, Oct. 1, 1958. Through BCIRA 38: 701 (1958). (636)

Two pawl and rachet mechanisms, one at each side of the front of the loom, are driven intermittently from the lay swords. One mechanism is connected to the cloth driving roller to drive it intermittently. The other is connected with one or more of a set of letoff rollers between the warp beam and a back-rest roller so as to provide a set of nips and in such a manner that the warp threads press the letoff rollers towards one another. The ratchets can be put out of action or reversed.

WARP LETOFF MOTIONS FOR LOOMS FOR WEAVING. E. J. Poole (to Wool Inds. Research Assoc.). BP 802 678, Oct. 8, 1958. Through BCIRA 38: 730 (1958). (637)

The invention relates particularly to a warp letoff motion of the kind employing positively-driven and intergeared nip rollers, at least one of which is covered, with rubber. These rollers are associated with a third or back roller, adjustable in both vertical and horizontal directions. They operate in a horizontal plane as far into the loom as conveniently possible and below the lowest position of the third roller to allow for clearance when the warp is making a horizontal tangent to the three rollers.

WARP TENSION MEASURING INSTRUMENT. K. Greenwood and G. Turton (to Brit. Rayon Research Assoc.). BP 802 787, Oct. 8, 1958. Through BCIRA 38: 731 (1958). (638)

A device that can be left on the loom and read while the warp is moving comprises a thin hollow rod, transversely compressible, arranged like a lease rod, and indicating means sensitive to the compression, for example, a rubber tube filled with oil or water. The arrangement is explained with reference to two sheets of drawings. Compensation for temperature changes is provided for and explained mathematically.

ROTARY LOOM. T. F. McGinley. USP 2 862 525, Dec. 2, 1958. (639)

Rotary loom in which the warp yarns are dispensed from bobbins mounted on rotatable carriers, and a single continuous weft yarn is dispensed from a single spool.

GRIPPER SHUTTLE PROPULSION. E. G. Mascarenhas (Brazil). USP 2 865 404, Dec. 23, 1958. (640)

Shuttle propelling means actuated by compressed air provided from a compressor in response to the reciprocal movements of the lay.

MEANS FOR ACTUATING A WEFT YARN CLAMP IN A GRIPPER SHUTTLE LOOM. E. Pfarrwaller (to Sulzer Frères SA). USP 2 865 405, Dec. 23, 1958. (641)

KNOTTING DEVICE. D. Messa (Italy). USP 2 865 665, Dec. 23, 1958. (642)

Device for automatically joining doubled yarns, broken in weaving, into a composite knot formed of two simple overhand knots.

MECHANISM FOR SELECTIVE FEEDING OF WEFT YARNS IN GRIPPER SHUTTLE LOOMS. E. Pfarrwaller (to Sulzer Frères SA). USP 2 865 406, Dec. 23, 1958. (643)

A yarn guide is provided for each individual yarn not only in a stationary part which is connected with the frame but also in the movable carrier for the yarn feeders. Yarn guide elements individually surrounding the weft yarns are interposed between the yarn guides in the stationary part and the movable carrier.

WEFT BEATUP. A. G. Billing and J. Duckworth (to Brit. Celanese Ltd). USP 2 865 407, Dec. 23, 1958. (644)

Reed mounted on a pivotally oscillating lay is used to beat up the weft and positioning of the reed at beatup is effected by a movement of the reed (in the direction of its wires) derived from the forward motion of the lay.

PICKING MECHANISM. G. S. Simmons, Jr. (to Crompton & Knowles Corp.). USP 2 866 482, Dec. 30, 1958. (645)

Picker stick mounting constructed so that the picking force for moving the stick will actuate a mechanism, separate from the stick, to cause the stick to move in such a way that its upper end moves in a straight line.

Knitting C3

MEANS FOR THE DISPERSAL OF FLUFF OR LINT FROM KNITTING MACHINES. A. Shortland (to Mellor Bromley & Co. Ltd). BP 801 690, Sept. 17, 1958. Through BCIRA 38: 670 (1958). (646)

A circular knitting machine is fitted with a compressor for supplying jets of air at comparatively low pressure at parts of the machine that particularly need to be kept clean.

RIB HOLE DETECTOR FOR REVOLVING AND STATIONARY HEAD RIB KNITTING MACHINES. E. Vossen (to Stop-Motion Devices Corp.). USP 2 862 377, Dec. 2, 1958. (647)

SYNCHRONIZED DRIVE FOR CIRCULAR HOSIERY MACHINE. W. Larkin (to Fidelity Mach. Co.). USP 2 863 309, Dec. 9, 1958. (648)

Means for obtaining precise synchronous relation between the cylinder and dial in a machine designed for the production of stockings having turned welts at the top.

YARN SEVERING MEANS FOR FULL-FASHIONED HOSIERY MACHINE. C. F. Miller (to Textile Mach. Works). USP 2 863 310, Dec. 9, 1958. (649)

Means for severing yarns at points closely adjacent to the selvages of the wide and narrow portions of the fabric at which the yarns are introduced.

LOOP TRANSFER MECHANISM FOR CIRCULAR KNITTING MACHINES. A. P. Saunders (to Wildt & Co. Ltd). USP 2 864 247, Dec. 16, 1958. (650)

MULTIFEED CIRCULAR HOSIERY MACHINE. H. E. Crawford (to H. E. Crawford Co.). USP 2 861 440, Nov. 25, 1958. (651)

Selector jack arrangement which permits the use of multifeed knitting throughout the complete stocking.

ARGYLE PATTERNING ON CIRCULAR, INDEPENDENT NEEDLE, HOSIERY MACHINES. I. H. C. Green and C. F. Brown (to Hemphill Co.). USP 2 861 441, Nov. 25, 1958. (652)

YARN CARRIER FOR CIRCULAR HOSIERY MACHINE. K. E. Hoefer. USP 2 861 442, Nov. 25, 1958. (653)

KNITTING MACHINE PATTERN CONTROL. F. C. Wiesinger (to Wildman Jacquard Co.). USP 2 861 443, Nov. 25, 1958. (654)

Mechanism for stopping the action of certain parts of the control mechanism except when there is need for their function.

CIRCULAR KNITTING MACHINE DRIVE. F. C. Wiesinger (to Wildman Jacquard Co.). USP 2 864 248, Dec. 16, 1958. (655)

Fully enclosed, automatically lubricated, 2-speed drive which can shift automatically from high to low and vice versa without shock or jerk.

ELECTRICAL STOP MOTION FOR CIRCULAR KNITTING MACHINE. A. Shortland (to Mellor Bromley & Co. Ltd). USP 2 865 184, Dec. 23, 1958. (656)

HOSIERY INSPECTION MACHINE. G. T. Smith (to Claussner Hosiery Co.). USP 2 865 542, Dec. 23, 1958. (657)

Certain areas of the forms which carry the hosiery are covered with a fine nap material which will interrupt a run started due to the expansion of the form and prevent it from developing into a long run.

TENSION DEVICE FOR CIRCULAR HOSIERY MACHINE. T. L. Capes. USP 2 866 326, Dec. 30, 1958. (658)

Device for maintaining uniform tension on the yarn at all times regardless of the size of the supply cones and the amount of yarn which they contain.

Fabrics C4

FLESH WOUND COVERINGS. H. Baron (Germany). BP 800 572, Aug. 27, 1958. Through BCIRA 38: 641 (1958). (659)

A fabric for application to wounds is woven from yarns that shrink to different extents when wetted, those that shrink most being arranged in the surface that comes next to the wound. The weft picks may be of fine and coarse counts alternately. The fabric may be woven with 2 layers of warps and wefts, interlaced, and the differential shrinkage may be due to using yarns of different twists. Weave diagrams are given. It is claimed that the slight yarn movement that occurs as the fabric becomes wet (e.g. with blood) prevents sticking of the dressing to the wound.

SHEET MATERIAL ADAPTED FOR USE IN PROVIDING ARTICLES WITH A PILE FINISH. B. B. Chem. Co. Ltd. BP 801 333, Sept. 10, 1958. Through BCIRA 38: 641 (1958). (660)

A carrier sheet is coated with a solution, in an organic solvent, of a film-forming material, cut fibers are deposited on the film, and the solvent is evaporated. The layer of pile fiber embedded in a porous matrix may be stripped from the carrier sheet.

PRODUCTION OF GLASS FIBER WEBS OR MATS. S. Palmer (to Versil Ltd). BP 802 523, Oct. 8, 1958. Through BCIRA 38: 724 (1958). (661)

The invention relates particularly to means for the production of webs or mats of glass fiber for use in making reinforced laminates. Multiple monofils from an extrusion device are fed to a V-groove in a drum from which the grouped filaments are conveyed in an air stream to a slowly moving conveyor surface on which they are deposited in overlapping circles.

ARTICLES FROM A MESH OF FILAMENTS. C. Stohr. BP 802 530, Oct. 8, 1958. Through BCIRA 38: 731 (1958). (662)

Plastic thread or plastic-covered wire or thread is cross-wound on a mandrel and heat is applied to weld the filaments together at the crossing points.

NONWOVEN GLASS FIBER MAT. E. W. Smart (to Owens-Corning Fiberglas Corp.). USP 2 855 634, Oct. 14, 1958. (663)

An integral mat of fibers is produced by directing a driven strand of glass fibers toward a collecting device causing the formation of loops and swirls. As the continuous strand is collected, it interlocks with the loops and swirls initially formed and a mechanically bonded mat results.

MANUFACTURE OF AIR PERMEABLE SYNTHETIC LEATHER. J. C. Richards (to E. I. du Pont de Nemours & Co.). USP 2 858 570, Nov. 4, 1958. (664)

Nonwoven sheets of liquid-swellable fibers bonded with a thermoplastic resin are formed by the application of heat and pressure. The sheet is soaked to swell the fibers and then dried to permit the fibers to shrink to their normal state giving a synthetic leather with outstanding breathing properties.

FELTED GLASS FILAMENTS FOR REINFORCED LAMINATES. D. M. Hawley and J. C. Williams (to Hawley Prods. Co.). USP 2 859 109, Nov. 4, 1958. (665)

Cut threadlike bundles of glass filaments are individually coated with resin so that they are more manageable in making glass fiber reinforced laminates.

STABILIZED LOOSELY WOVEN GAUZE FABRIC. H. W. Griswold (to Chicopee Mfg. Corp.). USP 2 860 068, Nov. 11, 1958. (666)

Apparatus for printing adhesive onto a loosely woven gauze in a regular pattern in order to stabilize the gauze (and eliminate sleaziness) yet leave it soft.

LOOPER MECHANISM FOR MULTIPLE NEEDLE TUFTING MACHINES. M. B. Penman (to Magee Carpet Co.). USP 2 860 588, Nov. 18, 1958. (667)

Electronic means for controlling the height of loopers according to a pattern.

APPARATUS FOR PRODUCING BONDED FIBROUS GLASS MATS. W. G. Cole, Jr. (to Ferro Corp.). USP 2 860 687, Nov. 18, 1958. (668)

MULTI-PLY COLLAR AND CUFF FABRIC. O. S. Lawton (to Phillips-Jones Corp.). USP 2 861 600, Nov. 25, 1958. (669)

The body of the collar or cuff is composed of a front ply of face warps and wefts and a back ply of rear warps and wefts, the two connected by binder threads. In the fold line area the back warps are eliminated, and the binder threads connect only the front and rear wefts.

APPARATUS FOR PRODUCING NONWOVEN FABRICS. F. Kalwaites (to Chicopee Mfg. Corp.). USP 2 862 251, Dec. 2, 1958. (670)

The application of fluid force is used to rearrange a layer of fibers into a nonwoven fabric made up of spaced, interconnected fibers in a predetermined pattern.

ANTIFRICTION AND ANTI-ICING FABRIC. L. J. Rasero (to Russell Mfg. Co.). USP 2 862 283, Dec. 2, 1958. (671)

In a 3-ply fabric for use in bearings, bushings, and airplane parts, Teflon yarns are disposed as floats on one surface and are bound under spaced filler yarns in both the third and second ply. The filler yarns of the third ply are bound by chains of material capable of bonding to an impregnant, such as Dacron or cotton. High tensile strength material, such as nylon, Dacron, or rayon, is used for the filler yarns.

THREAD FEED AND PATTERN CONTROL MECHANISM FOR USE ON MULTIPLE NEEDLE TUFTING MACHINES. J. L. Card. USP 2 862 465, Dec. 2, 1958. (672)

Tufting machine for making patterned loop fabrics in contrasting colors.

MENDING MACHINE FOR TUFTED RUGS. C. A. Bryant, R. F. Hackney, and R. J. McNamara (to Cabin Crafts Inc.). USP 2 862 466, Dec. 2, 1958. (673)

Machine for mending tufted rugs in which the pile height differs over the area of the rug.

GLASS FIBER MATS. D. Labino (to L. O. F. Glass Fibers Co.). USP 2 863 176, Dec. 9, 1958. (674)

Vapors of inorganic salts are introduced into the gaseous blast which attenuates the fibers and carries them into the collecting means. These vapors have the effect of dispersing and orienting the fibers so that they form a smooth surface without many protruding fibers.

GLASS FIBER INSULATING MATS. H. J. Snow and R. W. Kendrick (to Owens-Corning Fiberglas Corp.). USP 2 863 493, Dec. 9, 1958. (675)

Apparatus for collecting fibers to provide a mat of uniform thickness with improved strength, insulating, and sound attenuating characteristics.

WIPING CLOTH FOR OIL. M. A. Goldman (to Fiber Prods. Labs. Inc.). USP 2 863 715, Dec. 9, 1958. (676)

The cloth is composed of an unspun sheet of cotton fibers impregnated with a butadiene-acrylonitrile synthetic rubber latex. A substantial amount of natural cutose coating remaining on the fibers is modified by the action of acid and the modified cutose acts as a surface cement for the latex.

FUSED FABRIC ASSEMBLY. L. Bihaly (England). USP 2 864 151, Dec. 16, 1958. (677)

Interlining fabric for fused fabrics includes thermoplastic polythene strands which soften sufficiently to become adhesive at elevated temperatures.

WEAVING PILE CARPET WITH IMPROVED COVERAGE. F. W. E. Hoeselbarth (to C. H. Masland & Sons). USP 2 864 408, Dec. 16, 1958. (678)

The lateral relation of the pile ends to the stuffer warp ends in the dents or courses is reversed in the dents having only one pile warp end as compared to the dents having pile warp ends of both sets.

WOVEN BELTING. L. E. Richter (to Russell Mfg. Co.). USP 2 864 409, Dec. 16, 1958. (679)

Multi-ply belting in which the plies are bound together by binder yarns woven into the belting using a loom having a standard Knowles head motion.

APPARATUS AND METHOD FOR PRODUCING PATTERNED FOAM RUBBER COATED FABRICS. W. F. Bird (to Collins & Aikman Corp.). USP 2 865 046, Dec. 23, 1958. (680)

CORRUGATOR DOUBLE-BACKER BLANKET FOR USE IN THE MANUFACTURE OF CORRUGATED PAPER. R. Vollrath (to Victor Balata & Textile Belting Co.). USP 2 865 408, Dec. 23, 1958. (681)

Interwoven blanket in which marginal portions of the plate-engaging faces are surfaced with heat and abrasion-resistant synthetic yarns and the rest of the blanket is constructed of cotton to retain the water-absorption characteristics required.

POLYESTER FIBER DRYER FELT FOR FINE QUALITY PAPER. D. V. Asten. USP 2 865 409, Dec. 23, 1958. (682)

TUFTED CARPET WITH RESILIENT LINING. R. C. Gebert (to James Lees & Sons Co.). USP 2 866 206, Dec. 30, 1958. (683)

A resilient pad or underlay is formed as an integral part of the carpet during the tufting process.

TREATING NONWOVEN MATERIAL UTILIZING A RADIO FREQUENCY FIELD. C. A. Baer. USP 2 865 790, Dec. 23, 1958. (684)

The tensile strength of nonwoven fabrics is improved by exposing fibrous sheets impregnated with a bonding agent to a radio frequency field. The radio frequency field causes the bonding agent to spread uniformly through the sheet and simultaneously sets it.

FUR-LIKE FABRIC. W. R. Keen (to Collins & Aikman Corp.). USP 2 866 255, Dec. 30, 1958. (685)

Pile fabric closely simulating natural fur with a furry undercoating of fine fibers and coarser fibers extending beyond the undercoating, in the manner of the beard hairs of natural fur.

POWER TRANSMISSION AND CONVEYOR BELTING. G. E. Watts, S. B. Hainsworth, and H. J. Perry (to J. H. Fenner & Co. Ltd). USP 2 866 483, Dec. 30, 1958. (686)

Increased rupture resistance is achieved by the use of narrow sections of polyester weft yarns interspersed between the cotton yarn sections forming the major portion of the belting.

FINISHING AND CHEMICAL PROCESSING D

APPARATUS FOR USE IN TREATING LOOPS OF FABRIC. R. Coburn (to Flaxall Prods. Ltd). BP 802 576, Oct. 8, 1958. Through BCIRA 38: 734 (1958). (687)

The apparatus is for the treatment of fabric in festoon form and is designed to crowd the loops into a small space. The conveying elements are thin, flat bars mounted hinge fashion on endless bands that carry them around a channelled track in a box-shaped treatment chamber. The track has horizontal upper and lower runs joined by vertical runs with rounded corners. As the bars approach the upper run, where the fabric enters, they are made to stand on edge and thus push the loops of fabric together.

Chemical processes D1

FORMATION OF ALKALI-SOLUBLE CELLULOSE ETHERS. H. Weisberg (to Londat Aetz Fabric Co.). BP 800 478, Aug. 27, 1958. Through BCIRA 38: 646 (1958). (688)

Cellulose (e.g. cotton fabric) is impregnated with 3-50% caustic soda (e.g. 15%) for at least 1 min, excess alkali is removed, and the product is steeped in acrylonitrile. The cyanoethylated cellulose (0.5-12.5% N) is then impregnated with periodic or chromic acid, 0.5-50%, for a period (sec-24 hr) and at a temperature (room-boiling) related inversely to the concentration. A small amount of adiponitrile or similar nitrile may be added to the acrylonitrile to give a softer product. Details are covered by 15 claims and 5 examples, these including solubility data.

IMPARTING A FLAMEPROOF, WEATHER-RESISTANT FINISH TO CELLULOSIC MATERIALS. F. Ward (to Courtaulds Ltd). BP 800 157, Aug. 20, 1958. Through BCIRA 38: 647 (1958). (689)

The material is treated with an aqueous dispersion containing (1) antimony trioxide, alone or mixed with another oxide, (2) a synthetic resin containing chlorine (e.g. polyvinyl chloride), and (3) an aminoplast (e.g. urea/formaldehyde), then dried and baked. Alternately (3) may be applied first followed by (1) and (2) together.

CONTINUOUS TEXTILE BLEACHING PROCESS. W. A. S. White and N. F. Crowder (to Imp. Chem. Inds. Ltd). BP 803 021, Oct. 15, 1958. Through BCIRA 38: 734 (1958). (690)

The process comprises the following steps: (1) passing the cloth in open width through a chlorinated solvent, (2) removing surplus solvent, (3) flashing off entrained solvent, and, optionally, desizing or souring, (4) padding in caustic soda, preferably containing a peroxygen compound, (5) passing through a J-box in an atmosphere of steam, (6) rinsing, (7) padding with peroxide solution, and (8) repeating (5). Details are given in two examples; in the second the first solvent extraction is omitted.

PROCESS FOR RENDERING TEXTILES WATER REPELLENT. Midland Silicones Ltd. BP 803 055, Oct. 15, 1958. Through BCIRA 38: 736 (1958). (691)

The invention covers the use of titanic esters of the type of tetrabutyl titanate in conjunction with certain polysiloxanes.

TREATING FABRICS WITH SILOXANES. Midland Silicones Ltd. BP 802 540, Oct. 8, 1958. Through BCIRA 38: 736 (1958). (692)

In a batch process for depositing a siloxane on a fabric, the material is immersed in an emulsion containing a siloxane and a polyimine; it is then removed from the bath and dried. Triethanolamine titanate may be added to the emulsion as a catalyst. Nine examples are given; they include the treatment of nylon hose, and fabrics of cotton, wool, and manmade fibers.

ALKYLAMINE REACTION PRODUCTS. Farbenfabriken Bayer AG. BP 802 541, Oct. 8, 1958. Through BCIRA 38: 736 (1958). (693)

Water repellent finishing agents for textiles (cotton), paper, and leather are prepared by the action of epichlorhydrin on a molten organic acid salt (e.g. acetate) of a primary alkyl monoamine containing at least 14 C atoms (e.g. octadecylamine).

HYDROGEN PEROXIDE BLEACHING OF COTTON FABRIC. H. L. Potter (to E.I. du Pont de Nemours & Co.). USP 2 858 183, Oct. 28, 1958. (694)

Continuous method for scouring and bleaching cottons consists in pretreating the fabric with an aqueous solution of a surface active agent and a phosphate, rinsing, and bleaching with alkaline peroxide.

HEATING FABRICS BY DIRECT CONTACT WITH STEAM. T. E. Bell, J. L. Moore, C. F. Riegel, and H. D. Terhune (to E.I. du Pont de Nemours & Co.). USP 2 858 184, Oct. 28, 1958. (695)

Apparatus for heating fabrics by direct contact with steam in systems for continuous wet processing in which the impregnated fabric is temporarily stored in a J-box.

INLAY EFFECTS ON EMBOSSED FABRICS. H. R. Hushebeck and R. S. Babiarz (to Joseph Bancroft & Sons Co.). USP 2 858 232, Oct. 28, 1958. (696)

Durable inlay effects are produced in embossed fabrics by applying a paste consisting of a pigment and an alkyd resin condensate to the relief imparting surfaces of the embossing calender and simultaneously embossing and transferring the paste to the fabric depressions with heat and pressure.

GASEOUS METAL PLATING OF SYNTHETIC FIBERS. H. A. Toulmin, Jr. (to Commonwealth Eng. Co.). USP 2 859 130, Nov. 4, 1958. (697)

Method and apparatus for coating manmade fibers or fabrics with metal by bringing them in contact with heat decomposable gaseous metal compounds at a temperature high enough to cause decomposition and deposition of the metal on the fibers without injuring them.

FLAME RESISTANT CELLULOSE TEXTILES. W. A. Reeves, L. H. Chance, and G. L. Drake, Jr. (to U.S. Secy. Agri.). USP 2 859 134, Nov. 4, 1958. (698)

Cellulosic textiles are flameproofed by impregnation with tris(1-aziridinyl) phosphine oxide and an amino compound, e.g. urea or methylol melamine.

ABRASION RESISTANT RESIN TREATMENT FOR VISCOSE RAYON. J. T. Marsh and R. A. Blease (to Tootal Broadhurst Lee Co. Ltd). USP 2 859 136, Nov. 4, 1958. (699)

Increased abrasion resistance is given to fabrics composed wholly or mainly of viscose rayon by impregnating the fabric with an aqueous solution of an amino formaldehyde resin and treating with superheated steam to insolubilize the resin.

WATERPROOFING TEXTILES WITH METHYL SILICONE RESIN. R. E. Ellis. USP 2 859 137, Nov. 4, 1958. (700)

The silicone resin coating may be cured at temperatures below 100° C by the use of N,N'-diphenyl guanidine as a catalyst.

REEL TYPE APPARATUS FOR THE LIQUID TREATMENT OF YARN. E. T. Jones, Jr. (to Celanese Corp.). USP 2 859 605, Nov. 11, 1958. (701)

COATING GLASS FIBERS. J. W. Case. USP 2 860 450, Nov. 18, 1958. (702)

In order to obtain an intimate bond between fiber and coating, the coating is applied while the fibers are still in their nascent stage.

PEROXIDE BLEACHING OF COTTON FABRICS. J. H. Young (to E.I. du Pont de Nemours & Co.). USP 2 860 944, Nov. 18, 1958. (703)

Prior to the bleaching of cotton with an alkaline peroxide solution, the naturally occurring color bodies are extracted by treatment with an aqueous sodium hydroxide solution of a formamidine sulfinate.

BLEACHING CYANOETHYLATED COTTON. R. B. Dustman, Jr. (to E.I. du Pont de Nemours & Co.). USP 2 860 945, Nov. 18, 1958. (704)

Cyanoethylated cotton can be successfully bleached, without substantial reduction in nitrogen content, by the action of a hydrogen peroxide solution made alkaline by a molecularly dehydrated phosphate, e.g. sodium pyrophosphate.

COTTON CYANOETHYLATION PROCESS. S. F. Belt (to Monsanto Chem. Co.). USP 2 860 946, Nov. 18, 1958. (705)

In this continuous cyanoethylation process, cotton is impregnated with an aqueous solution of a strongly alkaline hydroxide and passed into a chamber containing acrylonitrile vapors (70° -80° C). An acrylonitrile-water azeotrope is continuously withdrawn. The cyanoethylated material is then washed and dried.

APPARATUS FOR CONTINUOUSLY COATING GLASS FIBERS. H. B. Whitehurst and W. P. Warthen (to Owens-Corning Fiberglas Corp.). USP 2 861 393, Nov. 25, 1958. (706)

LIQUID TREATMENT APPARATUS FOR TEXTILES. E. C. Rust, Jr. and L. M. Gageant (to James Hunter Mach. Co.). USP 2 861 750, Nov. 25, 1958. (707)

Apparatus in which the fabric is treated while mounted open width on a revolving creel or rotor.

IMPROVEMENT OF FASTNESS OF DYED CELLULOSIC FIBERS. C. Schuster, R. Gehm, J. Eisele, and W. Federkiel (to Badische Anilin- & Soda-Fabrik AG). USP 2 861 863, Nov. 25, 1958. (708)

Improved fastness to moisture and light is achieved by treatment with polyvinylimidazoles.

METALLIZED FIBERS. F. E. Drummond (to Commonwealth Eng. Co.). USP 2 862 783, Dec. 2, 1958. (709)

Method of coating freshly extruded fibers with a heat-decomposable gaseous metal compound to achieve uniform dispersions of metal particles.

BLEACHING METHOD. J. Dungler (Switzerland). USP 2 864 662, Dec. 16, 1958. (710)

The material is saturated with weak acid (e.g. formic or phosphoric) to neutralize alkali from the scouring process, superficially treated with sodium chlorite or hypochlorite, and heated.